

SEQUENCE LISTING

<110> Johnson, William G.
Stenroos, Edward S.

<120> METHODS FOR DIAGNOSING, PREVENTING, AND TREATING
DEVELOPMENTAL DISORDERS

<130> 601-1-057N

<140> UNASSIGNED

<141> 2000-05-23

<150> 60/136,198

<151> 1999-05-25

<160> 46

<170> PatentIn Ver. 2.0

<210> 1

<211> 2187

<212> DNA

<213> Homo sapiens

<400> 1

```

gccatggtga acgaagccag aggaaacagc agcctcaacc cctgcttgga gggcagtgcc 60
agcagtggca gtgagagctc caaagatagt tcgagatgtt ccaccccggg cctggaccct 120
gagcggcatg agagactccg ggagaagatg aggcggcgat tggaatctgg tgacaagtgg 180
ttctccctgg aattcttccc tcctcgaact gctgagggag ctgtcaatct catctcaagg 240
tttgaccgga tggcagcagg tggccccctc tacatagacg tgacctggca cccagcaggt 300
gaccctggct cagacaagga gacctcctcc atgatgatcg ccagcaccgc cgtgaactac 360
tgtggcctgg agaccatcct gcacatgacc tgctgccgtc agcgcctgga ggagatcacg 420
ggccatctgc acaaagctaa gcagctgggc ctgaagaaca tcatggcgct gcgggggagac 480
ccaataggtg accagtggga agaggaggag ggaggcttca actacgcagt ggacctggtg 540
aagcacatcc gaagtgaagt ttggtgactac tttgacatct gtgtggcagg ttaccccaaa 600
ggccaccccg aagcaggagg ctttgaggct gacctgaagc acttgaagga gaaggtgtct 660
gcgggagccg atttcatcat caccgagctt ttctttgagg ctgacacatt cttccgcttt 720
gtgaaggcat gcaccgacat gggcatcact tgccccatcg tccccgggat ctttcccatc 780
cagggctacc actcccttcg gcagcttgtg aagctgtcca agctggaggt gccacaggag 840
atcaaggacg tgattgagcc aatcaaagac aacgatgtg ccatccgcaa ctatggcatc 900
gagctggccg tgagcctgtg ccaggagctt ctggccagtg gcttggtgcc aggcctccac 960
ttctacaccc tcaaccgcga gatggctacc acagaggtgc tgaagcgctt ggggatgtgg 1020
actgaggacc ccaggcgctc cctaccctgg gctctcagtg cccaccccaa gcgccgagag 1080
gaagatgtac gtcccatctt ctgggcctcc agaccaaaga gttacatcta ccgtaccag 1140
gagtgggacg agttccctaa cggccgctgg ggcaattcct cttccctgc ctttggggag 1200
ctgaaggact actacctt ctacctgaag agcaagtccc ccaaggagga gctgctgaag 1260
atgtgggggg aggagctgac cagtgaagca agtgtctttg aagtctttgt tctttacctc 1320
tcgggagaac caaacccgaa ttggtcacaaa gtgacttgcc tgccctggaa cgatgagccc 1380
ctggcggctg agaccagcct gctgaaggag gagctgtgct ggggtgaaccg ccagggcatc 1440
ctcaccatca actcacagcc caacatcaac gggaagccgt cctccgacce catcgtgggc 1500
tggggccccca gcgggggcta tgtcttcagg aaggcctact tagagttttt cacttcccgc 1560
gagacagcgg aagcatttct gcaagtgtg aagaagtacg agctccgggt taattaccac 1620
cttgtcaatg tgaagggtga aaacatcacc aatgcccctg aactgcagcc gaatgctgtc 1680
acttggggca tcttccctgg gcgagagatc atccagccca ccgtagtgga tcccgctcagc 1740
ttcatgttct ggaaggacga ggcctttgct ctgtggattg agcgggtggg aaagctgtat 1800
gaggaggagt ccccgctccc caccatcatc cagtacatcc acgacaacta cttcctgtgc 1860

```

03572659 052300

cgacataggc	aagaacatag	ttggagtagt	ccttggctgc	aataatttcc	gagttattga	2700
tttaggagtc	atgactccat	gtgataagat	actgaaagct	gctcttgacc	acaaagcaga	2760
tataattggc	ctgtcaggac	tcatcactcc	ttccctggat	gaaatgattt	ttgttgccaa	2820
ggaaatggag	agattagcta	taaggattcc	attgttgatt	ggaggagcaa	ccacttcaaa	2880
aaccacacac	gcagttaaaa	tagctccgag	atacagtgca	cctgtaatcc	atgtcctgga	2940
cgcgccaag	agtgtggtgg	tgtgttccca	gctgttagat	gaaaatctaa	aggatgaata	3000
ctttgaggaa	atcatggaag	aatatgaaga	tattagacag	gaccattatg	agtctctcaa	3060
ggagaggaga	tacttaccct	taagtcagc	cagaaaaagt	ggtttccaaa	tggattggct	3120
gtctgaacct	caccagtgga	agcccagctt	tattgggacc	caggtctttg	aagactatga	3180
cctgcagaag	ctgggtggact	acattgactg	gaagcctttc	tttgatgtct	ggcagctccg	3240
gggcaagtac	ccgaatcgag	gcttttccaa	gatattttaac	gacaaaacag	taggtggaga	3300
ggccagggaag	gtctacgatg	atgccacaaa	tatgctgaac	acactgatta	gtcaaaagaa	3360
actccggggc	cggggtgtgg	ttgggttctg	gccagcacag	agtatccaag	acgacattca	3420
cctgtacgca	gaggctgctg	tgccccaggc	tgcagagccc	atagccacct	tctatgggtt	3480
aaggcaacag	gctgagaagg	actctgccag	cacggagcca	tactactgcc	tctcagactt	3540
catcgctccc	ttgcattctg	gcacccgtga	ctacctgggc	ctgtttgccg	ttgcctgctt	3600
tggggtagaa	gagctgagca	aggcctatga	ggatgatggg	gacgactaca	gcagcatcat	3660
ggtcaaggcg	ctgggggacc	ggctggcaga	ggcctttgca	gaagagctcc	atgaaagagt	3720
tcgcccagaa	ctgtgggcct	actgtggcag	tgagcagctg	gacgtcgcag	acctgcgcag	3780
gctgcggtac	aagggcatcc	gcccggctcc	tggctacccc	agccagcccg	accacaccga	3840
gaagctcacc	atgtggagac	tcgcagacat	cgagcagctc	acaggcatta	ggttaacaga	3900
atcattagca	atggcacctg	cttcagcagt	ctcaggcctc	tacttctcca	atttgaagtc	3960
caaataatatt	gctgtgggga	agatttccaa	ggatcagggt	gaggattatg	cattgaggaa	4020
gaacatatct	gtggctgagg	ttgagaaatg	gcttggaccc	attttgggat	atgatacaga	4080
ctaacttttt	ttttttttgc	ctttttttatt	cttgatgatc	ctcaaggaaa	tacaacctag	4140
ggtgccttaa	aaataacaac	aacaaaaaac	ctgtgtgcat	ctggctgaca	cttacctgct	4200
tctgggtttc	gaagactatt	tagtgaacc	ttgtagagga	gcagggtctt	cctgcagtgc	4260
ctggaaaaca	ggcgctgttt	ttttgggacc	ttgcgtgaag	agcagtgagc	agggttcctg	4320
tggtttccct	ggctccctctg	agatggggac	agactgaaga	cagaggctgt	ttgatttcaa	4380
agcaagtcaa	cctgcttttt	tctgttttta	cagtggaaac	taggaggcca	cttagtcgtc	4440
tttttttcc	cttagaagaa	aagcctgaaa	ctgagttgaa	tagagaagtg	tgaccctgtg	4500
acaaaatgat	actgtgaaaa	atggggcatt	ttaatctaag	tggttataac	agtggattct	4560
gacggggaag	gtgtagctct	gttctcttcg	gaagacctcg	ttttctaaag	gctggactaa	4620
atggctgcag	aactcccttt	ggcaaaaggc	atgcgctcac	tgcttgcttg	tcagaaacac	4680
tgaagccatt	tgccccagtg	tggctcaagca	gccatgcttt	ctgggcatth	tcgtcctccc	4740
ataatthcat	atttccgtac	ccctgaggaa	acaaaaagga	aatgaggaga	gaaagttact	4800
gttaagggtg	gttaacattt	tttttgtttt	ggtttgtttt	ggtttttttt	ttttgagaca	4860
gagtcgtggt	ctgtgcgcca	ggctggagtg	caggggcgca	atctcggtct	atagcaagct	4920
ccgcctcctg	ggttcatgcc	attctcctgc	ctcagcctcc	agagtagctg	ggactacagg	4980
tgccccaccac	cacaccgggc	taattttttg	tgtttttaca	aaatacaaaa	aagtagagac	5040
aggatttcac	tgtgttagcc	aggatgggtc	tgatctcccg	acctcgatg	ctgcccacct	5100
cagcctccca	aaatgctggg	attacaggcg	tgagccaccg	agcctggccg	gttaacatct	5160
tttaattgtt	tccaggattg	agcaggttct	cagctgggct	ctgatatccc	gtgaggagtt	5220
ggacaagtgg	gcagcataaa	gtcactcatt	tcttaccatt	ttattccctt	caattctcaa	5280
tatatthcagt	aatgaagaat	ggtgccacca	ctcaagcaac	aagcctcaaa	ctcaacctatg	5340
tcattcttttt	cttggatgat	tgcagttatt	tcaaaaattt	gcatgcaaaa	tatacactca	5400
tcctacttca	agatgggtgg	ggcaatagtc	aggagaagg	aacattggag	tcctgggttg	5460
atttgaagga	tgaagacgaa	gaagcaagg	aggaacaaat	gaagaaccat	ctttgttcat	5520
gaataggaat	attcaagatt	ataaagggtat	caggctctct	aaaattgatc	tatggattta	5580
ataccatttt	caatggaaat	tccaacagat	tttattgaat	gaaacaagca	ggtgtttata	5640
tggagtagca	aaggacttaa	aattacaaaa	tgtttctaaa	tatgaaggag	aggttgggga	5700
cacgcaccct	atgtgatacc	aagtthttatt	gtcaagacag	tgatcatggg	cagaggtagg	5760
cattctgagc	aggggaacaa	aataagggcc	tagaaactca	cccggtgcata	tgttgacctt	5820
tgcaaaatga	cctggtgaca	tggcaagtca	gtggggacag	gaaggaccac	tccctaagta	5880
atcccagaac	aatggctatt	catgtgggaa	aaaaagaaat	tttactttct	ctcaccttac	5940
ctggtgataa	gttccaaata	tgttaagggc	tttaatacaa	aaagcaaaaa	ttgtcagtg	6000
ttggatgaaa	aaagccttag	ggcagggaag	aatctcttga	gacataaagt	agtaatcata	6060

aaggacaaga	tggttaagtc	aattctgtta	aaactcaagg	cttatattaa	gcaaacactt	6120
gaagtgagaa	gatgatccac	aacttgagaa	gacatttata	atacaataa	ctgatgaagg	6180
attcataatc	acaaatatag	agaattccta	tttaaaaaaa	tagaaaaata	gtgaagacta	6240
cacaagagga	aatagggctt	ttaaataaat	agatgttctg	tagcattggt	cagggaaata	6300
tgaattagga	ccacaatgag	attccatttt	atatccataa	gatttgcaaa	ggttggtct	6360
gacagtacca	gttgtagat	ctgtaggac	ttgtacaaca	ttgtggatgt	gtaaacaggc	6420
accactgctt	taaaaaacaa	ttatccctta	cagacttgaa	catttgacaga	cgttatgac	6480
ttgcttccaa	ctcccacctg	tatgtccagc	aaactcttgc	atgtggccac	taggaggaat	6540
gtgtaagaat	gttcatagtt	acatatattat	aatagttaat	aactggaaaa	agtgaatgt	6600
atgtctgtct	acaggaaaat	aggtgaataa	ttagatatat	atattcattc	tacgggatat	6660
tattcagtag	tggaaatgag	tgaactacag	ctatacctca	caataagaat	gaatctcaga	6720
aaatattaag	gaaaaaagca	agtttgaaga	gaccacatgg	ggcgtactat	ttttattggg	6780
cccaaaaaca	agcaaaacca	agaatatgt	agtctaagca	tacgtataca	ataaaaactat	6840
gctattaaaa	aaaaaaggta	actgataaac	caaaattgag	catagtaatt	accacagaa	6900
ggaggaagtg	gaagggacag	gagcacatag	gtagatgcca	agttatgcag	ctgttctggt	6960
tctctctggt	aggcttacaa	gtgtttacta	tatgtctatta	atacattata	ctttataact	7020
aatagataac	agttttttac	atattaaata	tgttctactt	aaatatatta	taaaaaataa	7080
aggcaaagtg	gaatgtttaa	aaaaaaaaaa	aaaaaaaaaa	aa		7122

<210> 3
 <211> 564
 <212> DNA
 <213> Homo sapiens

<400> 3						
atggttggtt	cgctaaactg	catcgctcgt	gtgtcccaga	acatgggcat	cggcaagaac	60
ggggacctgc	cctggccacc	gctcaggaat	gaattcagat	atttccagag	aatgaccaca	120
acctcttcag	tagaaggtaa	acagaatctg	gtgattatgg	gtaagaagac	ctggttctcc	180
attcctgaga	agaatcgacc	tttaaagggt	agaattaatt	tagttctcag	cagagaactc	240
aaggaacctc	cacaaggagc	tcatttttctt	tccagaagtc	tagatgatgc	cttaaaactt	300
actgaacaac	cagaattagc	aaataaagta	gacatggtct	ggatagttgg	tggcagttct	360
gtttataagg	aagccatgaa	tcacccaggc	catcttaaac	tatttgtgac	aaggatcatg	420
caagactttg	aaagtgcac	gttttttcca	gaaattgatt	tggagaaata	taaacttctg	480
ccagaatacc	caggtgttct	ctctgatgtc	caggaggaga	aaggcattaa	gtacaaattt	540
gaagtatatg	agaagaatga	ttaa				564

<210> 4
 <211> 2158
 <212> DNA
 <213> Homo sapiens

<400> 4						
gcgcggcata	acgacccagg	tcgcggcgcg	gcggggcttg	agcgcgtggc	cggtgccgca	60
ggagccgagc	atggagtacc	aggatgccgt	gcgcagtctc	aataccctgc	agaccaatgc	120
cggctacctg	gagcagggtga	agcgccagcg	gggtgaccct	cagacacagt	tggaaagccat	180
ggaactgtac	ctggcacgga	gtgggtcgca	ggtggaggac	ttggaccggc	tgaacatcat	240
ccacgtcact	gggacgaagg	ggaagggtct	cacctgtgcc	ttcacggaat	gtatcctccg	300
aagctatggc	ctgaagacgg	gattcttttag	ctctccccac	ctggtgcagg	ttcgggagcg	360
gatccgcac	aatgggcagc	ccatcagtc	tgagctcttc	accaagtact	tctggcgcct	420
ctaccaccgg	ctggaggaga	ccaaggatgg	cagctgtgtc	tccatgcccc	cctacttccg	480
cttcctgaca	ctcatggcct	tccacgtctt	cctccaagag	aagggtggacc	tggcagtggt	540
ggaggtgggc	attggcgggg	cttatgactg	caccaacatc	atcaggaagc	ctgtggtgtg	600
cggagtctcc	tctcttggca	tcgaccacac	cagcctcctg	ggggatacgg	tggagaagat	660
cgcattggcag	aaagggggca	tctttaagca	aggtgtccct	gccttcaactg	tgctccaacc	720
tgaaggtccc	ctggcagtcg	tgagggaccg	agccccagc	atctcatgtc	ctctatacct	780
gtgtccgatg	ctggaggccc	tcgagggaag	ggggccgccc	ctgaccctgg	gcctggaggg	840
ggagcaccag	cgggtccaacg	ccgccttggc	cttgacgtg	gccactgct	ggctgcagcg	900

gcaggaccgc	catggtgctg	gggagccaaa	ggcatccagg	ccagggtcc	tgtggcagct	960
gcccctggca	cctgtgttcc	agcccacatc	ccacatgagg	ctcgggttc	ggaacacgga	1020
gtggccgggc	cggacgcagg	tgtgtcgggc	cgggcccctc	acctggtacc	tggacggtgc	1080
gcacaccgcc	agcagcgcg	aggcctgcgt	gcgctgggtc	cgccaggcgc	tgcagggccg	1140
cgagaggccg	agcgttgcc	ccgaggttcg	agtcttgctc	ttcaatgcta	ccggggaccg	1200
ggacccggcg	gccctgctga	agctgctgca	gccctgccag	tttgactatg	ccgtcttctg	1260
ccctaacctg	acagaggtgt	catccacagg	caacgcagac	caacagaact	tcacagtgc	1320
actggaccag	gtcctgtctc	gctgcctgga	acaccagcag	caactggaac	acctggacga	1380
agagcaggcc	agccccgacc	tctggagtgc	ccccagccca	gagcccgggtg	ggtccgcata	1440
cctgcttctg	gcgccccacc	caccccacac	ctgcagtgcc	agctccctcg	tcttcagctg	1500
catttcacat	gccttgcaat	ggatcagcca	aggccgagac	cccatcttcc	agccacctag	1560
tccccaaaag	ggcctcctca	cccaccctgt	ggctcacagt	ggggccagca	tactccgtga	1620
ggctgctgcc	atccatgtgc	tagtcaactg	cagcctgcac	ctggtgggtg	gtgtcctgaa	1680
gctgctggag	cccgcactgt	cccagtagcc	aaggcccggg	gttggagggtg	ggagcttccc	1740
acacctgcct	gcgtttctccc	catgaactta	catactaggt	gccttttgtt	tttggctttc	1800
ctggtttctgt	ctagactggc	ctagggggcca	gggctttggg	atgggaggcc	gggagaggat	1860
gtctttttta	aggtctctgtg	ccttggtctc	tccttctctc	tggctgagat	agcagagggg	1920
ctccccgggt	ctctcactgt	tgcagtggcc	tggccgttca	gcctgtctcc	cccaacaccc	1980
cgctgcctc	ctggctcagg	cccagcttat	tgtgtgcgct	gcctggccag	gccctgggtc	2040
ttgccatgtg	ctgggtggta	gatttctctc	tcccagtgcc	ttctgggaag	ggagagggcc	2100
tctgcctggg	acactgcggg	acagaggggtg	gctggagtga	attaaagcct	ttgttttt	2158

<210> 5
 <211> 7720
 <212> DNA
 <213> Homo sapiens

<400> 5						
taagttgaca	cttctcaggt	tgtcacaaga	ttcaggatatg	gctcactggt	gcaggacata	60
agctgggata	tcttggaat	tggctctgctt	gcaggcccta	gagagccttc	cttcttggtt	120
gattttctctc	tagagatcca	actgtcttct	caggctcccc	tgcctgcctc	ctccttggtt	180
cctttcttctg	ggcattgcca	gattactggg	ccccattttt	ccctacactt	actgccactc	240
atagtctgat	ggttcccaca	tctgcatcca	acctggactc	ttcccctgag	ctttcccctc	300
tacaaccacc	ttccccgggc	caagggcaca	caggcacctc	gacaaaacag	tgttctatgt	360
ttcttctctg	ccaaacctgc	ccctccctct	cccttttccc	atctgtggta	ccaccatggg	420
ctcagagaaat	aaaaaaaatg	aaggcttctg	tcattgactg	gggtggagat	ggaggggaaga	480
gttagtccag	aatcacaggt	gctgtagaaa	ggatacctga	gttgccggga	gaggggggtcc	540
atgagtggg	gatggaagga	gagcttggcc	cttcaaaca	ttgaagatct	gatcaaaaga	600
ttcagaacat	ctgtgatttt	gtggctgggtg	atgggtgaca	cctgggctaa	tgggggttggg	660
ggagtgggtg	gctctacaat	ttatggcctt	gggagatcct	tgtctcttat	agctgactgg	720
gaggttggaa	gcctgggctc	tagcccttgc	cttgatcctc	cggatctcat	tttctctatc	780
tgcctaacag	gacagagggg	ttggaaactg	atgagattag	ctcaaaggat	cctggcagct	840
caggctgcaa	gatttttttc	agacctcagt	gtttgggaaa	aaattgggta	ggtggagctt	900
agggactggc	cttaggcctg	caactgtta	tcacccctc	ccactacccc	atggaggcct	960
ggctggtgct	cacatacaat	aattaactgc	tgagtggcct	tcgcccatac	ccaggctcca	1020
ctcctgggct	ccattcccac	tccctgcctg	tctcctaggc	caactaaacca	cagctgtccc	1080
ctggaataag	gcaaggggga	gtgtagagca	gagcagaagc	ctgagccaga	cggagagcca	1140
cctcctctcc	caggatatgtg	acactcccca	tcccccttca	gaggccacac	accctatggc	1200
attcccacca	tgtgttaagg	attttctgaa	ctggaagggc	cctctgtttg	cctgaaggcc	1260
agagaatctt	gaagtggaga	ctgaggccca	gaccagagtg	tggcctgctc	aagattaaac	1320
gacaagttag	tgttcatccc	cctgaactag	tacctgggct	ctagcccttc	agtccagagc	1380
tgagttctca	gctcttctag	tctggggccc	caaggttggg	tgtgggggtc	atgattgttg	1440
gtggggaggg	gtcacagctg	gactaagacc	tgaaggtgag	actaggcagg	tgggaaagga	1500
gcttgacagag	tgatgctgct	caaaaggaca	ggaagagagc	ctggcttcag	aagcagccac	1560
agcaagagag	actactgact	gaacaggttg	gctccactgg	gggctccgga	aaggattttc	1620
tcagccccc	tcccagcac	tgtgtgttg	cgcacccat	gagagcctca	gcactctgaa	1680
ggtgcagggg	gcaaaggcca	aaagagctct	ggcctgaact	tgggtgggtcc	ctactgtgtg	1740

acttggggcga	tggccctcat	ctgtgctgaa	atgattccac	aaagattaaa	ctggctatca	1800
tttgttgatt	tcccccttct	tacatttaat	ccttgcagga	gaaagctaag	cctcaagata	1860
gtttgtcttct	ctttccccc	aggccaagga	gaaggtggag	tgagggctgg	ggtcggggaca	1920
ggttgaacgg	gaaccctgtg	ctctaaacag	ttagggtttg	ttcccgcagg	aactgaaccc	1980
aaaggatcac	ctggtattcc	ctgagagtac	agatttctcc	ggcgtggccc	tcaaggttag	2040
tgagtgaagca	ggtccacagg	ggcatgattg	gatcctggaa	tgaatgaatc	aaccatgaga	2100
gagtgaatga	acactggaat	caatagagta	gcagagtaat	ggatttgtga	gcaggaaaga	2160
gagctgctgg	gtgggaattc	aattccaggc	ttatatgagc	cctgctgtgc	agtcggcctg	2220
gagacagccc	agctcaggcc	ctgcctagac	ccctgtcaag	gaggccctgt	caagaggaga	2280
ggagggggcag	cacgggggca	aggcaagctt	gtgagcgga	aagcatgtc	cacttttagcg	2340
actggtatgt	ggaagatgag	ttagaggaga	cagatggaga	gaagtcatag	gaaataaatt	2400
ctgagcattt	taggagggcc	cagacacctg	gtgtccagtg	gagtgaagga	aacagtcgcc	2460
tcccaaaatt	cagtgtctga	ggtcaaagga	ttgaagttct	gtgatgacca	aggagaagcc	2520
agctctgtgg	tagggggcac	aggagctccc	caaggcccca	gggctgtcca	gctggctgtc	2580
ccctgccagc	acccatgtcc	tgtgacccca	ccccaccaag	atcccatggt	ttccgggaag	2640
ggcctactaa	actagcttga	gtgatgaggc	tagaaagggg	ctgggaccaa	ggtttaaaaa	2700
gcaaaaacaa	ctaacaaaa	ccacactgca	gccccccaa	ctaaaacatt	tttataaact	2760
tttttttttt	ttttgagatg	gagtcctcgt	ctgtcaccca	ggctagatg	caatggcaca	2820
atcttggctc	actgtaacct	ccacctcctg	gtgtcaagt	attctcctgc	ctcagcctcc	2880
cacgtagctg	ggactacagg	cacacgacac	cgcacccagc	tcattttgt	tttttagtag	2940
agacagggtt	tcactatggt	ggccaggctg	gtctcaaa	tctgacctca	ggtgatccac	3000
ccacctcagc	cttccaaagt	gctgggatta	caggcatgag	ccaccgcgcc	cagccattt	3060
ttgtaaaact	ttacaatgaa	gtaatttggt	gtcaaaaact	gacctgaaaa	ttaatgtgag	3120
tttatgtata	gttttaattt	atcccactag	tgtaaactgt	tcaccccaga	atatacactt	3180
gattattggg	tatatgaaaa	aaatatattt	tttgaatcac	ctttgatgaa	atcctaaaaa	3240
attttaaccc	tgaaacattt	gaataaggca	ttgtggacct	atggcaaact	cctggctatt	3300
tctgcatttt	gccccaaatc	atccttgaat	tatatcaact	gaacctcgtg	accacctgga	3360
gaaggcaatg	aggctcaagc	cagggaaggg	tgtgtcttaa	tcctaccttt	cattggatct	3420
gggaaaactg	agggagatgg	gggcagggct	ctatctgccc	caggcttccg	tccaggcccc	3480
accctcctgg	agccctgcac	acaacttaag	gccccacctc	cgcattcctt	ggtgccactg	3540
accacagctc	tttcttcagg	gacagacatg	gctcagcgga	tgacaacaca	gctgctgtct	3600
cttctagtgt	gggtggctgt	agtaggggag	gctcagacaa	ggattgcatg	ggccaggact	3660
gagcttctca	atgtctgcat	gaacgccaa	caccacaagg	aaaagccagg	ccccgaggac	3720
aagttgcatg	agcaggtggg	ccaggggggtg	atctgggggtg	gtgagggact	ggctcaggaa	3780
gaggaaacga	ggacatggaa	atgccaaacc	ccattggcac	tggtgaactg	aagtggagga	3840
gcccttcagt	ttgcattaat	atgggtgact	tatttcagag	acactgtgcc	aatgtcgggt	3900
acaattgccaa	cagttcacct	tcttggttgt	tggatttcgg	cattacagaa	ataaggaagc	3960
aggcccaaag	gagagcctgg	gaaatgaagt	tgagtgacc	catctggggg	ttgcttgatt	4020
tagggattta	gactgggaat	gactcctcca	aagatctgag	ggaagaaaact	gcacactgtg	4080
catagtggcc	tcttttctgc	cagccctaaa	cagctcaaga	agggagagtc	tctcacatta	4140
tgaggctgtg	tgcaaagcat	tctttttttt	ttttctgag	acaaagtctc	catatgttgc	4200
ccaggctggt	ctcaaattcc	tggactcaag	tgatcctccc	acctcagccc	tcccaaagt	4260
tgggattaca	gaaatgagcc	gtacgccctc	ctgaagcatc	ttggttcatg	catctcgcaa	4320
aactttgggc	tgtgtctctc	gaccacattg	gacctgaggt	ctccctataa	catttatatt	4380
gctaccaccc	ctttaatatc	ctgaacatga	tgatataact	aaagaaaaag	cagaggaaaa	4440
gtaatttgta	ggccaagtgt	tacggctcac	gectgtaatc	ccaacactgt	gggagtctga	4500
gatgggcaga	tcacttgagc	tcaggagttc	gagaccagcc	tgggcaagat	ggcaaaaccc	4560
catctctact	aaaaaataaa	aaaaattagt	cagggtgtgt	ggccatgcc	tgagtcacca	4620
gctactcagg	aggctgaggt	gggcagggtca	gttgagccca	ggaggcagag	attgtagatc	4680
gtgccactgc	actccagcct	gggcaacaga	gtgagacctt	gtcaaaagaa	agaaagaacg	4740
aaaaaaaagaa	agaaaggaag	gaaggaaggg	gaggaaggaa	agggaggggag	gaaagggagg	4800
gaggaaaggg	agggaggcaa	gggagagaaa	cttgtaatac	gcatttcttt	tttttttctt	4860
tgagatagag	ttttgtctt	gttgcccagg	gtggatggca	gtggcacaa	ctcagctcac	4920
tgcaacctcc	acctcccagg	ttcaagtgat	tctcctgctt	cagcctcctg	agtaggcaca	4980
cgccaccata	ccagctaat	tttttgtttg	tgtgtttgtt	ttgtttgttg	gtatttttag	5040
tagagatggg	ggtttcacca	tgtttggcag	gttggctcgc	aactcctcac	ctcataatcc	5100
gcccctcttg	gcctcccaaa	gtgctgagat	tacaggtgtg	agccactgcg	ccgggcctta	5160

agtgcacatt ttattttattt atttattttat ttattttattg agatggagtc ttgctctgtt 5220
 gccaggtctg gagtgcagtg gcacaatctc agctcactgc aacctccacc tcccagggtc 5280
 aagcaattct tctgccttgg cctccagagt agctgggact ataggcacct gccaccatgc 5340
 ctagctaatt tttgtatttt tagtagaaat ggggttttgc catgttggcc aggctggtct 5400
 ccattcttga ccttaagtga tctgtccacc tccacctccc aaagtgtctg gattacaggc 5460
 actatgtgag ccactgtgcc ggcccacatt ttaatatatta gcttgtcagc ctttaagtaat 5520
 gagattcagg aagcttgagg ataggcacac aggagcatag tttcaagttg tcctgaattt 5580
 tgcagccatc acaagttagt ttttaaggaa aaagattagt tcctaagttg tttctcaata 5640
 acttataata aaataacatc cacaattgat tggctatata ttgttttttt gtatcacaaa 5700
 ttccacaaac agataatggg tgaggcagct agtcagggac aaaacacttc ccaagtagct 5760
 gggattacag gtgtccgcca ccacacttgg ctagtttttt gtttgtttat tttttgagat 5820
 ggagtcttgc tctgtcgccc aggtctggagt gcagtggcat gatctcggt cactgcaagc 5880
 tccacctgcc gggttcacac cattctcctg cctcagcctc ccaagtagct gggactacag 5940
 gtgccagcca ccacgcccgg ctaatttttt gtattttttg tagagacggg gtttcacat 6000
 gttggccagg atgggtcttga tctcttagcc tcgtgatcca cccgcctcgg cctcccaaaa 6060
 tgctgggatt acaggcgtga gccaccgcac cgggcctaatt ttttatattt ttagtagaga 6120
 cgggggtttca ccatgttggc caggctggtc tcaaactctt gatctcaggt gatccacctg 6180
 ccttggcctc ccaaagtgtc gggattacac aagtaagcca ctgcacccag cctgggggta 6240
 caatttaaat tgctttttta ccttcaaate tttgacacct cagtgggct taatctgacc 6300
 gcactattac actacaagtc cccatccgtc tctgcttaat ttttgtccaa agcaaaaatc 6360
 aggtgatgtg ttcattgttg taaccccagt ttctacaaaa gtacctgggt gagagtaagt 6420
 aggatctcaa taaaggttga attaacaaat tttgtaatga ctgcaactcc agcaggagct 6480
 cctttttggg ctcccactgt ctctgacggc cctctcccct aaagaggtcc caatagcaag 6540
 tattttcctg ggtgacttcc agtgggctgg ggaatcaagg actaagaggg gagacactgc 6600
 atgtggaata ttctggctgt gctggctgtg ctggctgtgg actgagtcct ctgtcttccc 6660
 ccaccagtg tgcaccttg aggaagaatg cctgctgttc taccaacacc agccaggaag 6720
 cccataagga tgtttcctac ctatatagat tcaactggaa ccactgtgga gagatggcac 6780
 ctgacctgaa acggcatttc atccaggaca cctgcctcta cgagtgtctc cccaacttgg 6840
 ggccctggat ccagcaggta tgcattggct cctgcaggta caagacctag cggagcagct 6900
 gagctttcca ggcattctct caggctgcaa ccccagctcc agttctattc ggggctgagt 6960
 tgctgggatt cttgaacctg agcccttctt ttgtatcaaa atcaccacag tggatcagag 7020
 ctggcgcaaa gaggcggtac tgaactgtcc cctgtgcaaa gaggactgtg agcaatgggtg 7080
 ggaagattgt cgcacctcct acacctgcaa gagcaactgg cacaagggtc ggaactggac 7140
 ttcaggtgag ggctgggggtg ggcaggaaatg gagggatttg gaagtggagg tgtgtgggtg 7200
 tggaaacaggt atgtgacaat ttggagttgt agggctggca gacctcaaga tagttccggg 7260
 cccagtggtc aaaggtcttc cctcctctct acagggttta acaagtgcgc agtgggagct 7320
 gcttgcaaac ctttccattt ctacttcccc acaccactg ttctgtgcaa tgaaatctgg 7380
 actcactcct acaaggtcag caactacagc cgaggagtg gccgctgcat ccagatgtgg 7440
 ttcgacctag cccagggcaa cccaatgag gaggtggcga ggttctatgc tgcagccatg 7500
 agtggggctg ggccctgggc agcctggcct ttctgtctta gcttggccct aatgctgctg 7560
 tggctgtctc gctgacctcc ttttaccttc tgatacctgg aaatccctgc cctgttcagc 7620
 cccacagctc ccaactattt ggttctctgt ccatggctcg gcctctgaca gccactttga 7680
 ataaaccaga caccgcacat gtgtcttgag aattatttgg 7720

<210> 6

<211> 255

<212> PRT

<213> Homo sapiens

<400> 6

Met	Val	Trp	Lys	Trp	Met	Pro	Leu	Leu	Leu	Leu	Val	Cys	Val	Ala
1				5				10					15	

Thr	Met	Cys	Ser	Ala	Gln	Asp	Arg	Thr	Asp	Leu	Leu	Asn	Val	Cys	Met
			20					25					30		

Asp Ala Lys His His Lys Thr Lys Pro Gly Pro Glu Asp Lys Leu His

35

40

45

Asp Gln Cys Ser Pro Trp Lys Lys Asn Ala Cys Cys Thr Ala Ser Thr
50 55 60

Ser Gln Glu Leu His Lys Asp Thr Ser Arg Leu Tyr Asn Phe Asn Trp
65 70 75 80

Asp His Cys Gly Lys Met Glu Pro Ala Cys Lys Arg His Phe Ile Gln
85 90 95

Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn Leu Gly Pro Trp Ile Gln
100 105 110

Gln Val Asn Gln Thr Trp Arg Lys Glu Arg Phe Leu Asp Val Pro Leu
115 120 125

Cys Lys Glu Asp Cys Gln Arg Trp Trp Glu Asp Cys His Thr Ser His
130 135 140

Thr Cys Lys Ser Asn Trp His Arg Gly Trp Asp Trp Thr Ser Gly Val
145 150 155 160

Asn Lys Cys Pro Ala Gly Ala Leu Cys Arg Thr Phe Glu Ser Tyr Phe
165 170 175

Pro Thr Pro Ala Ala Leu Cys Glu Gly Leu Trp Ser His Ser Tyr Lys
180 185 190

Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg Cys Ile Gln Met Trp Phe
195 200 205

Asp Ser Ala Gln Gly Asn Pro Asn Glu Glu Val Ala Arg Phe Tyr Ala
210 215 220

Ala Ala Met His Val Asn Ala Gly Glu Met Leu His Gly Thr Gly Gly
225 230 235 240

Leu Leu Leu Ser Leu Ala Leu Met Leu Gln Leu Trp Leu Leu Gly
245 250 255

<210> 7

<211> 817

<212> DNA

<213> Homo sapiens

<400> 7

cgcaggaata gatggacatg gcctggcaga tgatgcagct gctgcttctg gcttttggtga 60
ctgctgcggg gactgcccag cccaggagtg cgcgggccag gacggacctg ctcaatgtct 120
gcatgaacgc caagcaccac aagacacagc ccagccccga ggacgagctg tatggccagt 180
gcagtccctg gaagaagaat gcctgctgca cggccagcac cagccaggag ctgcacaagg 240
acacctcccg cctgtacaac tttaactggg atcactgtgg taagatggaa cccacctgca 300
agcgccactt tatccaggac agctgtctct gactgtctac ccaacctggg gccctggatc 360
cggcaggatc accagagctg gcgcaaagag cgcattctga acgtgcccct gtgcaaagag 420
gactgtgagc gctggtggga ggactgtcgc acctcctaca cctgcaaaag caactggcac 480
aaaggctgga attggacctc agggattaat gactgtccgg ccggggccct ctgcagcacc 540

tttgagtcct	acttccccac	tccagccgcc	ctttgtgaag	gcctctggag	ccactccttc	600
aaggtcagca	actatagtcg	agggagcggc	cgctgcatcc	agatgtgggt	tgactcagcc	660
cagggcaacc	ccaatgagga	ggtggccaag	ttctatgctg	cggccatgaa	tgctggggcc	720
ccgtctcgtg	ggattattga	ttcctgatcc	aagaagggtc	ctctgggggt	cttccaacaa	780
cctattctaa	tagacaaatc	cacatgaaaa	aaaaaaa			817

<210> 8

<211> 1669

<212> DNA

<213> Homo sapiens

<400> 8

gctaggcagc	ttcgaaccag	tgcaatgacg	atgccagtca	acggggccca	caaggatgct	60
gacctgtggt	cctcacatga	caagatgctg	gcacaacccc	tcaaagacag	tgatgttgag	120
gtttacaaca	tcatthaaga	ggagagtaac	cggcagaggg	ttggattgga	gctgattgcc	180
tcggagaatt	tcgccagccg	agcagttttg	gaggccctag	gctcttgctt	aaataacaaa	240
tactctgagg	ggtacccggg	ccagagatac	tatggcggga	ctgagtttat	tgatgaactg	300
gagacctctt	gtcagaagcg	agccctgcag	gcctataagc	tggaccacac	gtgctggggg	360
gtcaacgtcc	agccctactc	aggctccctt	gcaaactttg	ctgtgtacac	tgccctgggtg	420
gaaccccatg	ggcgcacatc	gggcctggac	cttcaggatg	ggggccacct	gacctatggg	480
ttcatgacag	acaagaagaa	aatctctgcc	acgtccatct	tctttgaatc	tatgccctac	540
aaggtgaacc	cagatactgg	ctacatcaac	tatgaccagc	tggaggagaa	cgcacgcctc	600
ttccacccga	agctgatcat	cgcaggaacc	agctgctact	cccgaacact	ggaatatgcc	660
cggctacgga	agattgcaga	tgagaacggg	gcgtatctca	tggcggacat	ggctcacatc	720
agcgggctgg	tggcggctgg	cgtggtgccc	tccccatttg	aacactgcca	tgtggtgacc	780
accaccactc	acaagacctt	gcgaggctgc	cgagctggca	tgatcttcta	caggaaagga	840
gtgaaaagtg	tggatcccaa	gactggcaaa	gagattctgt	acaacctgga	gtctcttatc	900
aattctgctg	tgttccctgg	cctgcaggga	ggtccccaca	accacgccat	tgctgggggt	960
gctgtggcac	tgaagcaagc	tatgactctg	gaatttaaag	tttatcaaca	ccagggtgggtg	1020
gccaactgca	gggctctgtc	tgaggccctg	acggagctgg	gctacaaaat	agtcacaggt	1080
ggttctgaca	accatttgat	ccttgtggat	ctccgttcca	aaggcacaga	tggtggaagg	1140
gctgagaagg	tgctagaagc	ctgttctatt	gcctgcaaca	agaacacctg	tccaggtgac	1200
agaagcgctc	tgcggccag	tggactgcgg	ctggggaccc	cagcactgac	gtcccgtgga	1260
ctttttgaaa	aagacttcca	aaaagttagc	cactttattc	acagagggat	agagctgacc	1320
ctgcagatcc	agagcgacac	tgggtgtcaga	gccaccctga	aagagttcaa	ggagagactg	1380
gcaggggata	agtaccaggc	ggccgtgcag	gctctccggg	aggaggttga	gagcttcgcc	1440
tctctcttcc	ctctgcctgg	cctgcctgac	ttctaaagga	gcgggcccac	tctggaccac	1500
ccctggcgcca	cagaggaagc	tgcctgcccg	agacccccac	ctgagagatg	gatgagctgc	1560
tccaaaggga	actgttgaca	ctcggggcct	ttgagggggt	ttcttttggg	cttttttcat	1620
gttttcttca	caaatacaaa	tttgtttaag	tctcattgtt	agtaattct		1669

<210> 9

<211> 3112

<212> DNA

<213> Homo sapiens

<400> 9

gtggaacctc	gatattgggtg	gtgtccatcg	tgggcagcgg	actaataaag	gccatggcgc	60
cagcagaaat	cctgaacggg	aaggagatct	ccgcgcaaat	aagggcgaga	ctgaaaaatc	120
aagtcactca	gttgaaggag	caagtacctg	gtttcacacc	acgcctggca	atattacagg	180
ttggcaacag	agatgattcc	aatctttata	taaatgtgaa	gctgaaggct	gctgaagaga	240
ttgggatcaa	agccactcac	attaagttac	caagaacaac	cacagaatct	gagggtgatga	300
agtacattac	atctttgaat	gaagactcta	ctgtacatgg	gttcttagtg	cagctacctt	360
tagattcaga	gaattccatt	aacactgaag	aagtgatcaa	tgctattgca	cccagagaagg	420
atgtggatgg	attgactagc	atcaatgctg	ggagacttgc	tagaggtgac	ctcaatgact	480
gtttcattcc	ttgtacgctt	aagggatgct	tggaaactcat	caaagagaca	gggggtgccga	540
ttgccggaag	gcatgctgtg	gtggttgggc	gcagtaaaat	agttggggcc	ccgatgcatg	600

acttgccttct	gtggaacaat	gccacagtga	ccacctgcca	ctccaagact	gccccatctgg	660
atgaggaggt	aaataaaggt	gacatcctgg	tgggtgcaac	tggtcagcct	gaaatgggtta	720
aaggggagtg	gatcaaacct	ggggcaatag	tcacgcactg	tggaaatcaat	tatgtcccag	780
atgataaaaa	accaaagtgg	agaaaagttg	tgggtgatgt	ggcatacgac	gaggccaaag	840
agagggcgag	cttcatcact	cctgttcctg	gcggcgtagg	gccccatgaca	gttgcaatgc	900
tcacgcagag	cacagtagag	agtgcgaagc	gtttcctgga	gaaattttaag	ccaggaaagt	960
ggatgattca	gtataacaac	cttaacctca	agacacctgt	tccaagtgcac	attgatatat	1020
cacgatcttg	taaaccgaag	cccattggta	agctggctcg	agaaattggg	ctgctgtctg	1080
aagaggtaga	attatatggg	gaaacaaagg	ccaaagttct	gctgtcagca	ctagAACGCC	1140
tgaagcaccg	gcctgatggg	aaatacgtgg	tgggtgactgg	aataactcca	acacccttgg	1200
gagaagggaa	aagcacaact	acaatcgggc	tagtgcaagc	ccttgggtgcc	catctctacc	1260
agaatgtctt	tgcgtgtgtg	cgacagcctt	ctcagggccc	cacctttgga	ataaaagggtg	1320
gcgctgcagg	aggcggctac	tcccagggtca	ttcctatgga	agagtttaat	ctccacctca	1380
cagggtgacat	ccatgccatc	actgcagcta	ataacctcgt	tgctgcgggc	attgatgctc	1440
ggatatttca	tgaactgacc	cagacagaca	aggctctctt	taatcgtttg	gtgccatcag	1500
taaatggagt	gagaagggtt	tctgacatcc	aaatccgaag	gttaaagaga	ctaggcattg	1560
aaaagactga	ccctaccaca	ctgacagatg	aagagataaa	cagatttgca	agattggaca	1620
ttgatccaga	aaccataact	tggcaaagag	tgttgatac	caatgataga	ttcctgagga	1680
agatcacgat	tggaagggtc	ccaacggaga	agggtcacac	acggacggcc	cagtttgata	1740
tctctgtggc	cagtgaat	atggctgtcc	tggctctcac	cacttctcta	gaagacatga	1800
gagagagact	gggcaaaatg	gtggtggcat	ccagtaagaa	aggagagccc	gtcagtgccg	1860
aagatctggg	ggtgagtggg	gcactgacag	tgcttatgaa	ggacgcaatc	aagcccaatc	1920
tcacgcagac	actggagggg	actccagtgt	ttgtccatgc	tggcccgttt	gccaacatcg	1980
cacatggcaa	ttcctccatc	attgcagacc	ggatcgcaat	caagcttggt	ggcccagaag	2040
ggtttgtagt	gacggaagca	ggatttggag	cagacattgg	aatggaaaag	ttttttaaca	2100
tcaaagtcg	gtattccggc	ctctgcccc	acgtggtggg	gcttgttgcc	actgtcaggg	2160
ctctcaagat	gcacgggggg	ggccccacgg	tcactgttgg	actgcctctt	cccaaggctt	2220
acatacagga	gaacctggag	ctggttgaaa	aaggcttcag	taacttgaag	aaacaaattg	2280
aaaatgccag	aatgtttgga	attccagtag	tagtggcgt	gaatgcattc	aagacggata	2340
cagagtctga	gctggacctc	atcagccggc	tttccagaga	acatgggggt	tttgatgccg	2400
tgaagtgcac	tactggggca	gaagggggca	agggtgcctt	agccctgggt	caggccgtcc	2460
agagagcagc	acaagcacc	agcagcttcc	agctccttta	tgacctcaag	ctcccagttg	2520
aggataaaa	caggatcatt	gcacagaaga	tctatggagc	agatgacatt	gaattacttc	2580
ccgaagctca	acacaaagct	gaagtctaca	cgaagcaggg	ctttgggaat	ctccccatct	2640
gcatggctaa	aacacacttg	tctttgtctc	acaaccaga	gcaaaaagg	gtccctacag	2700
gcttcattct	gcccattcgc	gacatccgcg	ccagcgttgg	ggctgggttt	ctgtaccctt	2760
tagtaggaac	gatgagcaca	atgcctggag	tccccaccgg	gcctgttttt	tatgatattg	2820
atgtggaccc	tgaacagaa	caggtgaatg	gattattcta	aacagatcac	catccatctt	2880
caagaagcta	ctttgaaagt	ctggccagtg	tctattcagg	cccactggga	gttaggaagt	2940
ataagtaagc	caagagaagt	cagccccctgc	ccagaagatc	tgaaactaat	agtaggagtt	3000
tccccagaag	tcatttttcag	ccttaattct	catcatgtat	aaattaacat	aatcatgca	3060
tgtctgttta	ctttagtgc	gttccacaga	ataaaaggaa	acaagtgtgc	ca	3112

<210> 10

<211> 1792

<212> DNA

<213> Homo sapiens

<400> 10

cgagcccag	actcagactg	gggaagcaaa	caggggctgg	acaggccagg	agagcctgtc	60
ggacagtgat	cctgagatgt	gggagtgtgt	gcagaggag	aaggacaggc	agtgtcgtgg	120
cctggagctc	attgcctcag	agaacttctg	cagccgagct	gcgctggagg	ccctgggggtc	180
ctgtctgaac	aacaagtact	cggagggtta	tcctggcaag	agatactatg	ggggagcaga	240
ggtggtggat	gaaattgagc	tgctgtgcca	gcgcggggcc	ttggaagcct	ttgacctgga	300
tcttgacagc	tggggagtca	atgtccagcc	ctactccggg	tccccagcca	acctggccgt	360
ctacagacc	cttctgcaac	ctcacgaccg	gatcatggg	ctggacctgc	ccgatggggg	420
ccatctcacc	cacggctaca	tgtctgacgt	caagcggata	tcagccacgt	ccatcttctt	480

cgagtctatg	ccctataagc	tcaaccccaa	aactggcctc	attgactaca	accagctggc	540
actgactgct	cgaattttcc	ggccacggct	catcatagct	ggcaccagcg	cctatgctcg	600
cctcattgac	tacgcccgc	tgagagaggt	gtgtgatgaa	gtcaaagcac	acctgctggc	660
agacatggcc	cacatcagtg	gcctggtggc	tgccaagggtg	attccctcgc	ctttcaagca	720
cgcgacatc	gtcaccacca	ctactcacaa	gactcttcga	ggggccaggt	cagggctcat	780
cttctaccgg	aaaggggtga	aggctgtgga	ccccaaagact	ggccgggaga	tccttttacac	840
atttgaggac	cgaatcaact	ttgccgtgtt	cccateccctt	cagggggggc	cccacaatca	900
tgccattgct	gcagtagctg	tggccctaaa	gcaggcctgc	acccccatgt	tccgggagta	960
ctccctgcag	gttctgaaga	atgctcgggc	catggcagat	gccctgctag	agcgaggcta	1020
ctcactggta	tcaggtggta	ctgacaacca	cctggtgctg	gtggacctgc	ggcccaaggg	1080
cctggatgga	gctcgggctg	agcgggtgct	agagcttgta	tccatcactg	ccaacaagaa	1140
cacctgtcct	ggagaccgaa	gtgccatcac	accggggcggc	ctgcggcttg	gggccccagc	1200
cttaacttct	cgacagttcc	gtgaggatga	cttccggaga	gttgtggact	ttatagatga	1260
aggggtcaac	attggcttag	aggtgaagag	caagactgcc	aagctccagg	atttcaaatc	1320
cttcctgctt	aaggactcag	aaacaagtca	gcgtctggcc	aacctcaggc	aacgggtgga	1380
gcagtttgcc	agggccttcc	ccatgcctgg	ttttgatgag	cattgaaggc	acctgggaaa	1440
tgaggcccac	agactcaaag	ttactctcct	tccccctacc	tgggccagtg	aaatagaaaag	1500
cctttctatt	ttttggtgcg	ggagggaaga	cctctcactt	agggaagag	ccaggtatag	1560
tctcccttcc	cagaatttgt	aactgagaag	atcttttctt	tttccctttt	ttggtaacaa	1620
gacttagaag	gagggcccag	gcactttctg	tttgaacccc	tgtcatgac	acagtgtcag	1680
agacgcgtcc	tctttcttgg	ggaagttag	gagtgcctt	cagagccagt	agcaggcagg	1740
ggtgggtagg	caccctcctt	cctgttttta	tctaataaaa	tgctaacctg	ca	1792

<210> 11
 <211> 18596
 <212> DNA
 <213> Homo sapiens

<400> 11						
cctgtagtcc	cagctacgcg	agaggctgag	gcagcagaat	tacttgaacc	caggaggcgg	60
agggttcagt	gagccgagat	cgcgccactg	cactccagcc	tgggtgagag	agcgagactc	120
tgtctcaaaa	aaaaaaaaaa	aagaccgcca	gggctcaaac	aaaaaacctc	ggaaaagccc	180
tggcggctct	tttttttttt	tttttttttt	ttttttggga	cagtcttgct	ctgtcgccca	240
ggctggagta	caatggtcgg	atcttggtc	actgcaacct	ctgcctccca	ggttcaagca	300
attcttctgc	ctcagcctcc	caagtagcca	ccacgcccag	ctaatttttg	tacttttagt	360
agagacgggg	gtttcaccat	gttggtccagg	ctggctctga	actcctgacc	tcaggtgatc	420
caccgcctcc	ggccccccaa	agtactagga	ttacaggcgt	gagccaccgc	gtccagcgcc	480
ctggcggttt	ttaatcaagt	agaaaagctg	cattatacca	cttgcttcgg	ttgcttcagt	540
gagaacgaag	aaatggaaat	gcaaatccct	tattagtgtg	aggaaacaga	tctcaaacag	600
cagttttgtt	gacaagaccg	caggaaaacg	tgggaactgt	gctgctggct	tagagaaggc	660
gcggtcgacc	agacggttcc	caaagggcgc	agtccttccc	agccaccgca	cctgcatcca	720
ggttcccggg	tttccctaaga	ctctcagctg	tggccctggg	ctccgttctg	tgccacaccc	780
gtggctcctg	cgtttccccc	tggcgcacgc	tctctagagc	gggggcccgc	gcgaccccgc	840
cgagcaggaa	gaggcggagc	gcggggacggc	cgcgggaaaa	ggcgcgcgga	aggggtcctg	900
ccaccgcgcc	acttggcctg	cctccgtccc	gccgcgccac	ttggcctgcc	tccgtcccgc	960
cgcgccactt	cgctgcctc	cgtccccgc	ccgccgcgcc	atgcctgtgg	ccggctcggg	1020
gctgcccgcg	cgcccttgc	ccccgcgcg	acaggagcgg	gacgcgcagc	cgcgtccgcc	1080
gcacggggag	ttcagtagcc	tggggcagat	ccaacacatc	ctccgctgcg	gcgtcaggaa	1140
ggacgaccgc	acgggcaccg	gcaccctgtc	ggtattcggc	atgcaggcgc	gctacagcct	1200
gagaggtgac	gccgcggggc	cctgcggggc	gggtggcggg	aaggagggag	gcgcggctgg	1260
ggagagcgct	cgggagctgc	cgggcgctgc	ggaccccggt	tagtcctaac	ctcaatcctg	1320
ccagggaggg	gacgcacgtg	cctcctcgcc	ttacagacgc	cgaacaggag	ggtcccatta	1380
gggacgtgac	tggcgcgggc	aacacacaca	gcagcgacag	ccgggaggtg	agccgcgtcc	1440
cagcggctcc	gcggccgggc	tcgcagtcgc	cccagtgatg	ccgtggcccc	cgaggcgggc	1500
gtcatcgggc	agcgtttgcc	cagtgcctga	gggttagggg	gagctgcctg	ggcttgaccg	1560
cgcgcgggtc	tcaaagtcct	ggccttggcc	cctcctccgt	ttccccctgt	ggaccattcc	1620
gcttcgcagc	gttttcaaaa	actggagcga	aagtgatgtg	ggcggggcaa	aggcggcggg	1680

aagaggacag	cactgaagct	ggcgcgggaa	cttggtttcc	tggtggcctc	ccatccaatc	1740
cccacgaacc	agcttttctc	ttaaaccctg	aaaagagaaa	ttcgggagtt	cgagttctta	1800
gtcgtccttt	cctcttttct	ttccgacagg	agcaccacag	gcaaaaaatg	tctcgcgggt	1860
cattggcgcc	aggcttttcag	gggacagtgg	ggcggggcgg	ggtgggcaca	ggacgttagg	1920
cagccgttgg	ccctccctaa	ggccacaccg	tcctgccgtc	ctggatcctg	cgccagctgc	1980
gcgggggagg	ggactcgaag	gtgtgtgagc	caggggctga	ccttgaccgc	tcagataaat	2040
ggagcgcagc	cttgacacag	gggtggaggt	ggttttgaat	ggggaaaccc	attcgtggty	2100
aagcagattc	actgtagcta	gcggaaaagc	cctccggccc	acggacccat	ctagagacga	2160
atacatagca	gctgctgtgg	ctgattggcg	tgggacagcg	tggggagttt	tgtctgagga	2220
gagggatcca	cttttctgca	gctccaagcc	caggggcctt	tgatgagcca	tagacctcat	2280
ttttaaccca	cctttctgct	tagacattga	gcaagttact	tctcatatag	cttccctata	2340
tgttaaaaat	ggagaaaaata	atgcttagta	ggcaattctg	ataaaagcag	gtgcttgcaa	2400
aaatctctct	gttgtctgaa	tataaactgt	accacaagcg	agtgcggatg	aacgaggact	2460
gcatttaaag	ataagttttt	acactttcat	ttctctgtgg	ctcgacactt	ctgatgcctc	2520
cctttttgtt	cctgggacac	atgcttggtg	ttgtcttcac	acctttgtga	caggattagc	2580
actagtgggc	agtggatgat	agctcctcct	cccttttgcc	acatgttcat	ccctgccctc	2640
gccaccatct	cactgtgtgg	aattcctgtg	tccactgggt	accggggcac	agaagtgtct	2700
tctcagcctg	aatcgggcca	ctgatgggac	ttgcagcctg	ggagctccac	cgtgatctct	2760
ggcccacttt	gcgggagtct	aggcttttct	gatgtccag	gcctcacgtc	ccagggcagt	2820
tttcttccct	gaagaaagtt	ggatggcatg	atctgtcttc	ccatcttgaa	accgtattgc	2880
aaattgtttt	tcagatgaat	tccctctgct	gacaacccaa	cgtgtgttct	ggaaggggtg	2940
tttgaggagg	ttgctgtggg	ttatcaaggt	aaagaagtcg	ctgctattag	aagtcagtag	3000
tctgtttctc	acacagcagc	cagtgtgagc	ctttcaaaac	tcaaagcagc	caggtgtggt	3060
ggctcacgcc	tgtaatccca	ccgcttttgg	aggctgagtc	agatcacctg	aggttaggaa	3120
tttgggacca	gcctggccaa	catggcgaca	ccccagtcct	tactaataac	acaaaaaatt	3180
agccaggtgt	gctggtgcat	gtctgtaatc	ccagctactc	aggaggctga	ggcatgagaa	3240
ttgctcacga	ggcggagggt	gtagtgagct	gagatcgtgg	cactgtactc	cagcctggcg	3300
acagagggag	aacctatgtc	aaaaacaaaa	aaagacacca	ccaaagggtc	aagcatatca	3360
ttcctcaccc	tcaagccctt	agtggctcca	tttcaactcag	taagagccac	ggtccttatg	3420
gtgtccgttt	ttcagctctg	accttagctg	ctgctctctg	caccaccctg	ctgttcttgt	3480
gagtttttga	gcacaccggg	acatccccac	tccctggaac	cttcttcccc	cacacttggc	3540
ttcttccttt	gagtctctac	tccactcggg	caagccttcc	tagacctcct	gatttaaaac	3600
tgtgactctc	ccccaacctc	cttggtgttt	ctccgtagac	gaacatcacc	atctgatgta	3660
tgtcagcctt	tcccttcccc	tgtagaagg	gggacagcag	gtagtaaaag	tgaaatgtgc	3720
tgtaagcttt	atgagggcag	aggatttggt	tctcgtgttc	actgttgtat	cgccagggcc	3780
tcaaacacag	cctgccacat	agtaggagtc	aacatatatt	gatcactaaa	tgtagatacc	3840
acctgtgttc	ccatgttcat	ataaattcta	gaagagtctc	ttcagtaaca	aggtgaaccc	3900
cttcagagg	gctgagtagg	tacctcaggc	cggggccaga	gtgctgtgaa	gacagcagca	3960
gccagacca	agcttctctg	tgttccgtgt	cctggctctag	aaccagcgat	gttctttctg	4020
accagtgtct	tttggaaagt	ggctgaggtc	tgggctcagg	tctgggccat	actagaagct	4080
gggatccctt	ctatagagca	cttggtatgg	cttggtatgg	cttggggcaa	gccagaccca	4140
agccctctta	tcccatttta	gaaagggtct	caatttggat	ccagccccag	gtctgcctta	4200
gctctgtatt	cttgggggat	tttgttctgt	attggcctat	cttgactaac	aatgagcctt	4260
ggatttgaaa	catatcatca	gaaacctcag	aagacaacat	tcttaaactg	gctagagcct	4320
ggtctgaatg	gatgaaaagg	agagactttt	gaagcaatat	gtaaaagatt	gagaaatgat	4380
ttgtttgaaa	tttctcaatt	ggagaaaatt	ctttgatttg	ttggaaaatt	ctttgattct	4440
ttctcaatca	aagaaaatcg	ggacaaactc	aacaatagaa	agggaggaag	caagatactc	4500
agaaataaaa	tgcatctccc	tgtttcaact	taatgcttca	attcaggatt	ctaaggaatc	4560
cttgccagga	atgtcagact	caccttgata	gttggagtta	ctccattggg	gactcgatca	4620
aatacaggag	ttgaggcacc	tgcactgtaa	aatactgatt	agtctgatca	ttaggaatat	4680
cctgtatgcc	aggtagaaga	tacattgaac	agattgcatg	taggcattaa	attcattttg	4740
gggtattaca	tatagacaac	acattttcatt	aagaaacata	aaactgtcag	atcgggtggaa	4800
tacttaaaaag	cacttggagg	tgttttagcct	aaaaagctta	gttgagggga	atggaagaaa	4860
agatctggga	gggtgggttc	aaagaaggga	tcagactatc	ctaaagccct	caggaatctg	4920
ggctgggacc	acctacttaa	agataggatg	ggcagctggg	tgtgggtggc	cacgcctgta	4980
atcccagcac	ttcgggaggc	cgaagcgggc	ggatcacctg	aggtcaggag	ttcgaggcca	5040
gcctgaccaa	catggagaaa	cgctgtctct	actaaaaata	caaaattagc	tgggtgtagt	5100

ggcgcatgcc	tgtaatccca	gctactcggg	aggctgaggc	aggggaatcg	cttgaacctg	5160
ggaggtggag	ggtgccgtga	gccacgatcg	cgccattgca	ctccagcctg	ggcaacaaga	5220
gcgaaactct	caaaaaacaa	aaaaaaggat	gggttccata	tgggtggtgt	caagtgccca	5280
cctcctagca	agtcagcagg	ggccagaggg	ccttgtaagt	ggtgtctcgg	ggggatcaac	5340
tgagatggct	taagattttac	ctggatgcct	gctctgctct	ccccatctct	tccagggatc	5400
cacaaatgct	aaagagctgt	cttccaaggg	agtgaanaatc	tgggatgcc	atggatcccc	5460
agactttttg	gacagcctgg	gattctccac	cagagaagaa	ggggacttgg	gcccagttta	5520
tggcttccag	tggaggcatt	ttggggcaga	atacagagat	atggaatcag	gtgaggagat	5580
agaacaatgc	cttccatttc	cgggtgcctc	tcctagcacg	tgtttgctcc	gttgttttag	5640
ataaggtctg	ggggatgagt	caatgtcaca	ggagctgatg	tatagctttg	accttgtgag	5700
gggtggtgcc	aggttgaagc	cacaattaac	gcctactgaa	ggcctgttca	catctttttt	5760
tttttttttt	ttttaattat	tatactttaa	gttttagggg	acatgtgcac	aatgtgcagg	5820
ttagttagat	atgtatacat	gtgccatgct	ggtgcgctgc	accactaact	caccatctag	5880
catcaggtat	atctcccaat	gctatccctc	ccccctcctc	ccacccacac	acatccccag	5940
agtgtgatgt	tccccctcct	gtgtccatat	gttctcgttg	ttcgattccc	actatgagtg	6000
agaatatgcg	gtgttttggt	ttttgttctt	gcgatagttt	actgagaatg	atgattttcca	6060
tttcaccacg	tccctacaga	ggacatgaac	tcatcatttt	ttatggctgc	atagtattcc	6120
atgggtgata	tgtgccacat	tttcttaate	cagtctatca	tgttgacat	ttgggttggt	6180
tccaagtcct	tgcctattgt	gaatagtgcc	acaataaaca	tacgtgtgca	tgtgtcttta	6240
tagcagcatg	atttaatatg	ccttttgggt	tataccaggt	aatgggatgg	ctgggtcaaa	6300
tggattttct	agttctagat	ccccgaggaa	tcgccacact	gacttccaca	atgggtgaac	6360
tagtttacag	tcccaccaac	agtgtcaaag	tgtcctatct	ctccacatcc	tctccagcac	6420
ctgttggttc	ctgacttttt	aatgattgcc	attctaactg	gtgtgagatg	gtatctcatt	6480
gtgggtttga	tttgcggttc	tctgatggcc	agtgatgggt	agcatttttt	catgtgtttt	6540
ttggctgcat	aaatgtcttc	ttttgagaag	tgtctgttca	tgtccttcgc	ccactttttg	6600
atgggggtgt	ttttttctta	taaatttgtt	tgagttcatt	gtagattctg	gatattagcc	6660
ctttgtcaga	tgagtagggt	gcaaaaaatg	tctcccattt	tgtgggttgc	ctgttcactc	6720
tgatggtagt	tctctttgct	gtgcagaagc	tctttagttt	aattagatcc	catttgtcaa	6780
ttttggcttt	tgttgccatt	gcttttggca	taggcattgaa	gtccttgccc	atgcctatgt	6840
cctgaatggt	aatgcctagg	ttttcttcta	gggtttttat	ggtttttaggt	ctaacgttta	6900
agtctttaat	ccatcttgaa	ttgatttttg	tataagggtg	aaggaaggga	tccagtttca	6960
gctttttaca	tatggctagc	cagttttccc	agcaccattt	attacatagg	gaatcctttc	7020
cccattgctt	gtttttctca	ggtttgtcaa	agatcagata	gtttagata	tgcggcggtta	7080
tttctgaggg	ctctgttctg	ttccattgat	ctatgtgtct	gttttggtac	cagtaccata	7140
ctgttttggt	tactgtagcc	ttgtagtata	gtttgaagtc	aggtagcgtg	atgcctccag	7200
ctttgttctt	ttggcttagg	attgacttgg	cgatgcgggc	tcttttttgg	ttccatatga	7260
actttaaagt	agtttttttc	aattctgtga	agaaagtcat	tggtagcttg	atggggatgg	7320
catgaatct	ataaattacc	ttgggcagta	tggccatttt	cacgatattg	attcttcta	7380
cccatgagca	tggaaatggt	ttccatttct	ttgtatcctc	ttttatttca	ttgagcagtg	7440
gtttgtagtt	ctccttgaag	aggctccttca	catccctttt	aagggtggatt	cctagggtatt	7500
ttattctctt	tgaagcaatt	gtgagtggaa	gttcactcat	gatttggctc	tctgtttgtc	7560
tgttattggt	gtataagaat	gcttgtgatt	tttgagatt	gattttatat	cctgagactt	7620
tgctgaagct	gcttatcagc	ttaaggagat	tttgggctga	gacaatgggg	ttttctagat	7680
atacaatcat	gtcgtctgca	aacagggaca	atttgacttc	ctcttttcct	aattgaatac	7740
cctttatttc	cttctcctgc	ctaattgccc	tggccagaac	ttccaacact	atggtgaata	7800
ggagtgggtga	gagagggcat	ccctgtcctg	tgccagtttt	caaagggaat	gcttccagtt	7860
tttgccatt	cactatgata	ttggctgtgg	ccttgtcata	gatagctctt	attattttga	7920
aatatgttcc	atcaataacct	aatttattga	gagtttttag	catgatgtgt	tgttgaattt	7980
tgtcaaaggc	tttttctgca	tctattgaga	taatcatgtg	gtttttgtct	ttggatctgt	8040
ttatatgctg	gattacattt	attgatttgc	gtatattgaa	ccagccttgc	atcctaggga	8100
tgaagccac	atgatcatgg	tggataagct	ttttgatgtg	ctgctggatt	cggtttgcca	8160
gtattttatt	gaggattttt	gcatcaatgt	tcatcaagga	tattgggtcta	aaattctctt	8220
ttttggtgtg	tctctgcccc	gctttggtat	caggatgatg	ttggcttcat	aaaatgagtt	8280
agggaggatt	ccctcttttt	ctattgattg	gaatagtttc	agaagggaatg	gtaccagttc	8340
ctctttgtac	ctctggagaa	ttcggtctgt	aatccatctg	gtcctggact	ctctttggtt	8400
ggaagctat	tgattattgc	cacaatttca	gctcctgtta	ttggtctatt	cagagattca	8460
acttcttctt	ggtttagtct	tgggagagtg	tatgtgtcaa	ggaatttatc	catttcttct	8520

agatttttcta	gtttattttgc	gtagagggtgt	ttgtagtaat	ctctgatggg	agtttgtatt	8580
tctgtgggat	cgggtggtgat	atcccccttta	tcattttttta	ttgcgtctat	ttgattcttc	8640
tcttttttctt	tatttagtctt	gctagcgggtc	tataaaatttt	gttgatcctt	tcaaaaaacc	8700
agctcctgga	ttcattaatt	ttttgaaggg	ttttttgtgt	ctctatttcc	ttcagttctg	8760
ctctgatttt	agttatttct	tgccttctgc	tagcttttga	atatgtttgc	tcttgctttt	8820
ctagtctctt	taattgtgat	gttaggggtgt	caatttttga	tctttcctgc	tttctcttgt	8880
gggcatttag	tgctataaat	ttccctctac	acactgcttt	gaatgtgtcc	cagagggtct	8940
ggtatgttgt	gtctttgttc	ttgttggttt	caaagaacat	ctttatttct	gccttcattt	9000
cgttatgtac	ccagtagtca	ttcaggagca	ggttggtcag	tttccatgta	ggtgagcagt	9060
tttgagtga	attcttaatc	ctgagttcta	gtttgattgc	actgtggtct	gagagatagt	9120
ttgttataat	ttctgttctt	ttacatttgc	tgaggagagc	tttacttcca	actatgtggt	9180
cggtttttga	ataggtgtgg	tgtggtgctg	aaaaaaatgt	atattctgtt	gatttgggat	9240
ggagttctgt	agatgtctat	taggtctgct	tgggtgcagag	ctgagttcaa	ttcctgggta	9300
tccttggtga	ctttctgtct	cgttgatctg	tgtactgttg	acagtgggtg	ttaaagtctc	9360
ccattattaa	tgtgtggagt	ctaagtctct	ttgtagggtca	ctcagatgat	tggcacttac	9420
tgggcgcttg	gcactttcca	tactgtgtca	tcggcagata	gctgcatggt	tgggtgttcgt	9480
gctgggggat	gggaagttca	tcgggtgggac	aaggacaaaa	tgcccccat	gctttgttgt	9540
ggctttaatc	tccttttcca	ggctgagcca	cagcgtgctg	taggtggcgc	tgctgtgaag	9600
cgcagtacca	gggtcacact	ccactcccag	ctctgcagag	gtggagaaaag	aatgaaacat	9660
ctcactcctg	gacttccact	ttcctgtcac	tgttggtgtc	acctcttact	ggatgtcaca	9720
gagcccagcc	cctcccacct	gtgcctagga	aaagcagatg	ccaccttgga	atgtgggggt	9780
tgtgtgtgca	atttactagc	tgggcagaga	ccagcaacct	ggagagcagg	tgtctcgtct	9840
aaggggacag	tcacatttca	cctccagcca	cctggaggaa	tttgggcctg	gtgatgtcag	9900
aattcttcaa	taaaagccta	aaatctatat	tttatgtgcg	gtcatgagat	ctgttaaagt	9960
ttagcaactt	caggaagttt	aaaaatgctg	tgtggacctt	gaataggcaa	gttcttaaag	10020
gcagaaaagt	gaatgctagt	ttccagggac	tggggaacag	ggaggaatgg	ggagttcatg	10080
tttaatgggc	acagagggtt	tgttagggat	gacgaaaaag	ttcgggagat	ggtgatgggt	10140
atggagatgg	tgatgggtgat	ggagatgggt	atgggtgatg	tgatgggtgat	gggtgatggt	10200
gatgggtgat	gtgatgggtga	tggagatggg	gatgggtgat	gtgatggaga	tgggtgatggt	10260
gatgggtgat	gtgatggaga	tgggtgatggt	gatggagatg	gtgatgggtga	tgggtgatgga	10320
gatgggtgat	gtgatgggtga	tgggtgatggt	gatgggtgat	gtgatggaga	tggagatggt	10380
gatgggtgat	gttgccctaac	atcaggaacg	tgcttaatgc	ttctgaattg	cacacaaaaa	10440
tggcaagttt	aatattatgt	gtactttatc	acaatgaaaa	aagctgctgc	gtgggccaag	10500
ttacttgtgc	aggtaatggt	ctgcagggtg	ttgcctgcac	ctcagttgta	gggtgtccgt	10560
aggatgtgag	gccagtcctc	gggcttaaat	atgctttaaa	tcctgcctag	tattcaatta	10620
tttcttgtcg	cttaaaaggc	ctaataaaaat	tatggtctta	gtttacagtg	gtatgaatgc	10680
ttagctggtg	gatttttagta	ggaaagtctg	tccttttttg	tttttaattt	tgttttacag	10740
attcacagga	tttttttttt	tttttttttt	tttttttttt	taatgcacag	aaagtttccc	10800
tggactctct	accaggtttc	cccagtgata	atatcttggg	taacatcctg	tatacattca	10860
cattggtgca	ttcctcagag	ttgtcagatt	ttgctagttt	tacgtgcact	tgtgtatgtg	10920
tgtatttgca	atttttagcac	gtgtagactc	ttgttaaccac	tacaatcaag	ttacagaact	10980
acactaccaa	ggttcactct	tttaaaatct	ttgatgttac	cttttttgga	acagtgacca	11040
tgagaggact	ttcctcccaa	aattttgaaa	actactgaac	cagaatatag	tctgacacta	11100
ataggtagaa	atttaaccaa	aggagattat	gaagctctgc	acttgagtta	acaaaatcac	11160
ttctcagctt	ccagttccat	ctcagaagga	aggaaaagg	attaaaaatc	cagagaccag	11220
aaaatgggag	caaagtacaa	ggtggtgtaa	tcattacaga	ggtttcctga	tgtttccaag	11280
tcagtcgtgt	gttgagctgc	taaactctaa	agtaattttta	ggtggaatgt	tggaaacatg	11340
ctgctgaggt	gatagaaaag	aatccatggt	cctctgttag	ttggaaaagta	tatggaatac	11400
tatattctac	ataagataca	atactctctg	tgagacaagg	ataaagtaga	ttttgtcagt	11460
gaaattgtga	caagaatcgc	tgatgggttt	agagcctaag	tttgcgagga	gcactggaag	11520
aaattaagat	tgttgagatt	ggaaagggtt	agctatgggg	gaacaggagg	aggtgactcc	11580
atgacagacc	aaatattcaa	aggactgtgt	agaagaggaa	aaagactttg	ttagggctcc	11640
agaggacaga	gccaggagtc	agacagggcc	ttgaactcaa	cccaccgaga	tctgcaaaact	11700
ttgcaggatg	caccagatgt	cttgtagcca	tgggtcaagg	ggggaccctg	ggtaagagac	11760
tgtaatagat	gacctctaag	gccatctcat	gacatgtgtg	attaatgtat	gtacctgtcc	11820
tctctttttg	acaattctac	agattattca	ggacagggag	ttgaccaact	gcaaagagtg	11880
attgacacca	tcaaaaacaa	ccctgacgac	agaagaatca	tcagtgtcgc	ttggaatcca	11940

agagggttgaa	agaaccccg	cgtcttcatt	tatactaacc	atactcttag	agggagcaa	12000
tctggttttg	tgcagaggca	ctgagggagg	caggaccctg	ggcaacttcc	cccagccaca	12060
tgggtgtgtg	acgttgggca	agtcacattt	tgctgcactt	tcaccttcag	atcatgaggt	12120
tgggcccaga	ggattttttt	tttttttttt	tttttttgaga	cagagttttg	ctctgttgcc	12180
caggctggaa	tgcaacggcg	tgatcttggc	tcactgtaac	ctctgcctcc	tgggttcgag	12240
tgattctcct	gcctcagcct	ccaagtagct	gggattacag	catgtgccac	catgcctggc	12300
taattttgta	tttttagtag	agacgggttc	acatgttggg	caggctgggc	ttgactcctg	12360
accctcagat	gatctgcctt	gcctcagcct	cccaaccgag	tgatcttaag	ttgtgtatta	12420
tactcattct	tacacaaaaa	gggcttttaa	tgcctagaaa	ctacatgaag	atgttaacat	12480
tttaaatgga	agcagatgaa	gttccagctc	gctgccacct	cactaacatt	tttaacaatt	12540
atattgtaaa	attcaactct	accaggggtg	agagccaggt	gtgggtggctc	acacctgtaa	12600
ttccaacaac	tccagaggcc	aaggcgagag	gatcatttga	accacaggaa	tttgaggctg	12660
tagtgagtca	tgatcacgcc	attgcactcc	atcctgggca	acagagttag	accctgaata	12720
tttaaaaaaca	acaacaacaa	caaaactcta	tcaggatata	ataagtactt	agagtgaat	12780
acttgcattc	gtaatagaga	cttatttttt	ttttttttga	gacacagtct	caccctgttg	12840
cccaggctgg	agtgcagtgg	tttgatctcc	gctcacggca	acctccatct	cccaggttca	12900
agtgaagtcc	cattcctcag	ccccagagct	gggaccacag	gcgcgcgaat	ttttgtattt	12960
ttagcagaga	cggggtttca	ctatgttggc	caggctagtc	tcaaactcaa	gttggcctca	13020
agtgatctgc	ccaccctggc	gtcccagtgt	tgggatttca	ggcatgagcc	actgtgcctg	13080
gccatgtaat	agagactttt	aatataggag	ggtgtaccag	aagcaccagt	ttcctgtggc	13140
aaacagaatt	attcctgtctg	tattttgtaat	ttggtgccac	gaggtagccc	agatcccttc	13200
agctctgatg	gaagagcatt	gcttcagccg	taaatggaca	cctgcagaaa	ccttgcaccg	13260
atggatagtc	tccctcagct	ccgtgccatc	gctgcagggg	ctgttatgga	catcactgca	13320
gcccagtggc	tctctctcct	ggtctccacc	atatgagtgt	gcttctgttt	ctctcctgtt	13380
ttactttgcc	tttagctgtg	gtctttcaaa	ccaccatccc	tccttatctt	cctctgtctg	13440
ttcctcagat	cttctctctga	tggcgctgcc	tccatgccat	gcctctgtcc	agttctatgt	13500
ggtgaacagt	gagctgtcct	gccagctgta	ccagagatcg	ggagacatgg	gcctcgggtg	13560
gcctttcaac	atcgccagct	acgcctgtct	cacgtacatg	attgcgcaca	tcacgggcct	13620
gaaggtgggc	tgtctcggga	agggtagact	gccagcctac	cacatgagct	cttcagttct	13680
ttaatatggg	aaaacaaatt	gcagagttta	gtctctgatt	agctttttaa	tttgatatgt	13740
gtaagtaaga	catgaaccag	cttttacttt	gaaaccttcc	ttttctggaa	ggttttctgg	13800
ccctgtggta	tatgacttaa	cagatctata	caggttggtt	gtgatacagc	ttctatggat	13860
cttctcaaaa	gctatgctga	ggttgggtat	ggtggctcat	gcctgtaatc	ccagcacttt	13920
ggaagactga	gacaggagca	attgcttgag	gtctggagtt	caataccagc	ctgggcaaca	13980
taacaagatg	ctgttgctac	aaaaaaatgg	aaaagctaca	ctaaattatt	tttttaaaaa	14040
aagccttgcg	gtgtctgcat	attctaatgt	ttttaaatga	tgttttaaag	aattgaaact	14100
aacatactgt	tctgctttct	cccggtttat	agccagggtga	ctttatacac	actttgggag	14160
atgcacatat	ttacctgaat	cacatcgagc	cactgaaaat	tcaggtaaga	atttagatgt	14220
atacttttgg	gtttggtacc	ttctcttgat	aaaagggttg	ctgtggaaca	ggtatctgct	14280
caatgctgtg	tccaagataa	agatgactgc	tccaaatgtg	gggcttcagt	ttagggagaa	14340
gtggtgggca	ggtgggcagg	acaaggcagg	catctgcctc	agcaaccatg	gcacttaact	14400
tgtcagggtg	tgtgaggtac	taagcaccag	taccagagag	ggaagagcca	cattcaagcc	14460
aggggattgt	ccaaaaggag	gcattttaac	tcattttaac	ttgaaggaga	attgaagtgc	14520
aaatgttttt	ccttttcttt	tttttttgaga	tggagtcttt	ctctgtcggc	caggctggag	14580
tgtgccgtgg	tgcgatctca	gctcactgca	acctccacct	cccgggttca	agcaattctt	14640
ctgcctcagc	ctcccaggta	gctgggatta	caggcacatg	ccaccacacc	cagctaattt	14700
tttgatttat	tagtagagat	ggggtttcgt	catgttggcc	aggctgatct	caaactcctg	14760
acttcaagtg	taccacctgc	ctcagcctcc	gaaagtctct	gaattacagg	cataagccac	14820
caccctggcc	ataaatattt	tttgtttaatt	ttacattaag	tacaatattt	aggtccaaac	14880
ttcaaaagtc	tgttgaaatc	cctgaagtta	tagcagccaa	caattgatat	gaaatggcaa	14940
taaaaatgta	agttcatctg	cttcatgagc	cttaaggaaa	aaaactcaga	accagacact	15000
ttttagcccc	ttccaggtta	gatccagggt	ttaaaagtta	ttcctttgag	ggagtttgcc	15060
tgctttttgag	tggaggtgac	ttcaggctta	ttctctctgg	ctctctgctc	tggtcatttt	15120
tagacatagt	aataggttgt	gacctgtctt	cacatcctaa	ttgccactgt	ctgttcatcc	15180
caggaatcct	ggctttcatc	cctttctggt	cactgtccat	gcatgtcatc	tttctctctt	15240
tctgccaggg	accagatggg	ttagggattg	tgaattcaag	taaactgaga	gctactatga	15300
gttacagatt	gactgtgttc	ctgtctttaa	taaatttgcc	aagagtgggt	ataagaactt	15360

acacctgatg	aggcaccagg	ctcctgatgc	tgtgtaatgt	cacaaaatac	ccctcactct	15420
cgatctgtgc	aagagaacag	ctgggttgcg	tccaatcatg	ttacataacc	tacgcgaagg	15480
tatcgacagg	atcatactcc	tgtaaaatag	aactttgttg	atcacatcct	gtgtacttgt	15540
ttcacggaca	tgaggagcaa	ttacaacagg	tcgtacaatt	atggcaaaat	aatggcctta	15600
ttttgttttt	agcttcagcg	agaaccagga	cctttcccaa	agctcaggat	tcttcgaaaa	15660
gttgagaaaa	ttgatgactt	caaagctgaa	gactttcaga	ttgaagggtta	caatccgcat	15720
ccaactatta	aaatggaaat	ggctgttttag	gggtgctttca	aaggagctcg	aaggatattg	15780
tcagtcttta	ggggttgggc	tggatgccga	ggtaaaaagt	ctttttgctc	taaaagaaaa	15840
aggaactagg	tcaaaaatct	gtccgtgacc	tatcagttat	taatttttaa	ggatgttgcc	15900
actggcaaat	gtaactgtgc	cagttctttc	cataataaaa	ggctttgagt	taactcactg	15960
agggtatctg	acaatgctga	ggttatgaac	aaagtgaagga	gaatgaaatg	tatgtgctct	16020
tagcaaaaac	atgtatgtgc	atttcaatcc	cacgtactta	taaagaaggt	tgggtgaattt	16080
cacaagctat	ttttggaata	tttttagaat	attttaagaa	tttcacaagc	tattccctca	16140
aatctgaggg	agctgagtaa	caccatcgat	catgatgtag	agtgtgggta	tgaactttta	16200
agttatagtt	gttttatatg	ttgtctataat	aaagaagtgt	tctgcattcg	tccacgcttt	16260
gttcattctg	tactgccact	tatctgctca	gttccttctc	aaaatagatt	aaagaactct	16320
ccttaagtaa	acatgtgctg	tattctgggt	tggatgctac	ttaaaagagt	atatttttaga	16380
aataatagtg	aatatatttt	gccctatttt	tctcatttta	actgcatctt	atcctcaaaa	16440
tataatgacc	atttaggata	gagttttttt	tttttttttt	taaactttta	taaccttaaa	16500
gggttatttt	aaaataatct	atggactacc	attttgccct	cattagcttc	agcatgggtg	16560
gacttctcta	ataatatgct	tagattaagc	aaggaaaaga	tgcaaaacca	cttcgggggt	16620
aatcagtga	atattttttc	cttcgttgca	taccagatac	ccccgggtgt	gcacgactat	16680
ttttattctg	ctaatttatg	acaagtgtta	aacagaacaa	ggaattatc	caacaagtta	16740
tgcaacatgt	tgcttatttt	caaattacag	tttaatgtct	aggtgccagc	ccttgatata	16800
gctatttttg	taagaacatc	ctcctggact	ttgggttagt	taaatctaaa	cttattttaag	16860
gattaagtag	gataacgtgc	attgatttgc	taaaagaatc	aagtaataat	tacttagctg	16920
attcctgagg	gtggatgac	ttctagctga	actcatcttg	atcggtagga	tttttttaa	16980
ccatttttgt	aaaactattt	ccaagaaatt	ttaagccctt	tcacttcaga	aagaaaaaag	17040
ttgttggggc	tgagcactta	attttcttga	gcaggaaagga	gtttcttcca	aacttcacca	17100
tctggagact	ggtgtttctt	tacagattcc	tccttcattt	ctgttgagta	gccgggatcc	17160
tatcaaagac	caaaaaaatg	agtctgttta	acaaccacct	ggaacaaaaa	cagattttat	17220
gcatttatgc	tgctccaaga	aatgctttta	cgtctaagcc	agaggcaatt	aattaatttt	17280
tttttttttg	acatggagtc	actgtccgtt	gccagggctg	cagtgcagtg	gcgcaatctt	17340
ggctcactgc	aacctccacc	tcccagggtt	aagtgattct	cctgcctcag	cctcccatgt	17400
agctgggata	acaggcacct	gccaccatgc	ccggctaatt	ttttgtattt	ttttagagaa	17460
cagggtttca	ccatgttggc	caggctgggc	tcaaacacct	gacctcaa	gatccacctg	17520
cctcagcctc	caaagtgtt	gggattacag	gcgtaagcca	ccatgcccag	ccctgaatta	17580
atatttttaa	aataagtttg	gagactgttg	gaaataatag	ggcagaggaa	catattttac	17640
tggctacttg	ccagagttag	ttaactcatt	aaactctttg	ataatagttt	gacctctgtt	17700
ggtgaaaatg	agccatgata	tcttgaacat	gatcagaata	aatgccccag	ccacacaatt	17760
gtagtccaaa	cttttttaggt	cactaacttg	ctagatgggtg	ccagggtttt	ttgcacaagg	17820
agtgcaaata	ttaagatctc	cactagttag	gaaaggctag	tattacagaa	gccttgtag	17880
aggcaattga	acctccaagc	cctggccctc	aggcctgagg	attttgatac	agacaaactg	17940
aagaaccgtt	tgtttagtga	tattgcaaac	aaacaggagt	caaagcttgg	tgctccacag	18000
tctagttcac	gagacaggcg	tggcagtggc	tggcagcatc	tcttctcaca	ggggccctca	18060
ggcacagctt	accttgggag	gcatgtagga	agcccgtggg	atcatcacgg	gatactttaa	18120
atgctcatgc	aggtgggtcaa	catactcaca	caccctagga	ggagggaatc	agatcggggc	18180
aatgatgcct	gaagttagat	tattcacgtg	gtgctaactt	aaagcagaag	gagcgagtac	18240
cactcaattg	acagtgttgg	ccaaggctta	gctgtgttac	catgcgtttc	taggcaagtc	18300
cctaaacctc	tgtgcctcag	gtccttttct	tctaaaatat	agcaatgtga	ggtggggact	18360
ttgatgacat	gaacacacga	agtcctctct	agagggtttt	tgggtgccctt	taaaagggat	18420
caattcagac	tctgtaaata	tccagaatta	tttgggttcc	tctgggtcaaa	agtcagatga	18480
atagattaaa	atcaccacat	tttgtgatct	atttttcaag	aagcgtttgt	attttttcat	18540
atggctgcag	cagctgccag	gggcttgggg	tttttttggc	aggtagggtt	ggggagg	18596

atggacttgg	cccaaaagaa	aaactgctaa	aagacaaaaa	agacctcacc	cttacttcat	3240
ctattttttt	aataaataga	gactcactaa	aaaaaaaaaa	aaaaaaaaaa	a	3291

<210> 13
 <211> 1776
 <212> DNA
 <213> Homo sapiens

<400> 13

atggtgccct	ccagcccagc	ggtggagaag	caggtgcccc	tggaacctgg	gcctgacccc	60
gagctccggt	cctggcgggc	cctcgtgtgc	tacctttgct	tctacggctt	catggcgag	120
atacggccag	gggagagctt	catcaccccc	tacctcctgg	ggcccgacaa	gaacttcacg	180
cgggacgagg	tcacgaacga	gatcacgccg	gtgctgtcgt	actcctacct	ggccgtgctg	240
gtgcccgtgt	tcctgctcac	cgactacctg	cgctacacgc	cggtgctgct	gctgcagggg	300
ctcagcttcg	tgtcgggtgtg	gctgctgctg	ctgctgggcc	actcgggtggc	gcacatgcag	360
ctcatggagc	tcttctacag	cgtcaccatg	gccgcgcgca	tcgcctattc	ctcctacatc	420
ttctctctcg	tgcgggccgc	gcgctaccag	cgtgtggccg	gctactcgcg	cgctgcgggtg	480
ctgctggggc	tggtcaccag	ctccgtgctg	ggccagctgc	tggtcactgt	gggcccagtc	540
tccttctcca	cgctcaacta	catctcgtcg	gccttcctca	ccttcagcgt	ggtcctcgcc	600
ctcttctctga	agcgccccaa	gcgcagcctc	ttcttcaacc	gcgacgaccg	ggggcggtgc	660
gaaacctcgg	cttcggagct	ggagcgcgat	aatcctggcc	caggcgggaa	gctggggacac	720
gccctgcggg	tggtcgtgtg	ggactcagtg	ctggcgcgga	tgctgcggga	gctggggggac	780
agcctgcggc	ggccgcagct	gcgcctgtgg	tcctctctgt	gggtcttcaa	ctcgcccggc	840
tactacctgg	tggtctacta	cgtgcacatc	ctgtggaacg	aggtggaccc	caccaccaac	900
agtgcgcggg	tctacaacgg	cgcggcagat	gctgcctcca	cgctgctggg	cgccatcacg	960
tccttcgccc	cgggcttcgt	gaagatccgc	tgggcgcgct	ggtccaagct	gctcatcgcg	1020
ggcgtcacgg	ccacgcaggc	ggggctggtc	ttccttctgg	cgcacacgcg	ccacccgagc	1080
agcatctggc	tgtgctatgc	ggccttcgtg	ctgttcacgc	gctcctacca	gttcctcggtg	1140
cccatcgcca	cctttcagat	tgcatcttct	ctgtctaaag	agctctgtgc	cctgggtcttc	1200
gggggtcaaca	cgttctttgc	caccatcgtc	aagaccatca	tcactttcat	tgtctcggac	1260
gtgcggggcc	tgggcctccc	ggtccgcaag	cagttccagt	tatactccgt	gtacttctctg	1320
atcctgtcca	tcactacttt	cttggggggc	atgctggatg	gcctgcgcga	ctgccagcgg	1380
ggccaccacc	cgcggcagcc	cccggcccag	ggcctgagga	gtgccgcgga	ggagaaggca	1440
gcacagcgac	tgagcgtgca	ggacaagggc	ctcggaggcc	tgacgccagc	ccagagccccg	1500
ccgctttccc	cagaagacag	cctgggggct	gtggggccag	cctccctgga	gcagagacag	1560
agcgaccat	acctggccca	ggccccggcg	ccgcaggcag	ctgaattcct	gagcccagtg	1620
acaaccctt	ccccctgcac	tctgtcgtcc	gcccaggcct	caggccctga	ggctgcagat	1680
gagacttgtc	cccagctggc	tgtccatcct	cctggtgtca	gcaagctggg	tttgcagtg	1740
cttccaagcg	acgggtgttca	gaatgtgaac	cagtga			1776

<210> 14
 <211> 2500
 <212> DNA
 <213> Homo sapiens

<400> 14

tgaatcgccc	ggggctcgccg	tctccgcctc	gccgcagtcg	gggcagccgc	tgccctcttt	60
tccatgtatc	gtccaggatc	ccatgacaga	ttctgttgct	acgtctcctt	acagagtttg	120
agcgggtgctg	aactgtcagc	acatctgtcc	ggtccagcat	gccttctgag	acccccagg	180
cagaagtggg	gcccacaggc	tgccccacc	gctcagggcc	acactcggcg	aaggggagcc	240
tggaagaagg	gtccccagag	gataaggaag	ccaaggagcc	cctgtggatc	cggcccgatg	300
ctccgagcag	gtgcacctgg	cagctggggc	ggcctgcctc	cgagtcccca	catcaccaca	360
ctgccccggc	aaaatctcca	aaaatcttgc	cagatattct	gaagaaaatc	ggggacaccc	420
ctatggtcag	aatcaacaag	attgggaaga	agttcggcct	gaagtgtgag	ctcttgggca	480
agtgtgagtt	cttcaacgcg	ggcgggagcg	tgaaggaccg	catcagcctg	cggatgattg	540
aggatgtcta	gcgcgacggg	acgctgaagc	ccggggacac	gattatcgag	ccgacatccg	600
ggaacaccgg	gatcgggctg	gccctgggctg	cggcagtgag	gggctatcgc	tgcatacatg	660

THE

<400>	15						
cggcagccct	cctacctgcg	cacgtggtgc	cgctgctgct	gcctcccgtc	cgccctgaac	60	
ccagtgcctg	cagccatggc	tcccggccag	ctgccttat	ttagtgctctc	tgacaaaacc	120	
ggccttgtgg	aatttgcaag	aaacctgacc	gctcttggtt	tgaatctggt	cgcttccgga	180	
gggactgcaa	aagctctcag	ggatgctggt	ctggcagtc	gagatgtctc	tgagttgacg	240	
ggatttcctg	aaatgttggg	gggacgtgtg	aaaactttgc	atcctgcagt	ccatgctgga	300	
atcctagctc	gtaatatcc	agaagataat	gctgacatgg	ccagacttga	tttcaatctt	360	
ataagagttg	ttgcttgcaa	tctctatccc	tttgtaaaga	cagtggtctc	tccaggtgta	420	
actgttgagg	aggctgtgga	gcaaatgtac	attggtggag	taaccttact	gagagctgca	480	
gccaaaaacc	acgctcgagt	gacagtggtg	tgtgaaccag	aggactatgt	ggtggtgtcc	540	
acggagatgc	agagctccga	gagtaaggac	acctccttgg	agactagacg	ccagttagcc	600	
ttgaaggcat	tcactcatac	ggcacaatat	gatgaagcaa	tttcagatta	tttcaggaaa	660	
cagtacagca	aaggcgtatc	tcagatgccc	ttgagatatg	gaatgaacc	acatcagacc	720	
cctgcccagc	tgtacacact	gcagcccaag	cttcccatca	cagttctaaa	tggagcccct	780	
ggatttataa	acttgtgcca	tgctttgaac	gcctggcagc	tgggtgaagga	actcaaggag	840	
gcttttaggta	ttccagccgc	tgctcttttc	aaacatgtca	gcccagcagg	tgctgctggt	900	
ggaattccac	tcagtgaaga	tgaggccaaa	gtctgcattg	tttatgatct	ctataaaaac	960	
ctcacaccca	tctcagcgcc	atatgcaaga	gcaagagggg	ctgataggat	gtcttcattt	1020	
ggtgattttt	ttgcattgtc	cgatgtttgt	gatgtaccaa	ctgcaaaaat	tatttcagaa	1080	
gaagtatctg	atggtataat	tgccccagga	tatgaagaag	aagccttgac	aatactttcc	1140	

1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2

<400>	16					
gcgtggg	cgt	gagatggcgg	cggcagcgg	gagcagcgc	aagcggagcc	tgcggggaga 60
gctgaagcag	cgtctgcggg	cgatgagtg	cgaggagcgg	ctacgccagt	cccgcgtact	120
gagccagaag	gtgattgccc	acagtgagta	tcaaaagtcc	aaaagaattt	ccatctttct	180
gagcatgcaa	gatgaaattg	agacagaaga	gatcatcaag	gacattttcc	aacgaggcaa	240
aatctgcttc	atccctcggt	accggttcca	gagcaatcac	atggatatgg	tgagaataga	300
atcaccagag	gaaattttct	tacttcccaa	aacatcctgg	aatatccctc	agcctggtga	360
gggtgatgtt	ggggaggagg	ccttgtccac	agggggactt	gattctatct	tcatgccagg	420
ccttgggttt	gacaaacatg	gcaaccgact	ggggaggggc	aagggtact	atgatgccta	480
tctgaagcgc	tgtttgcagc	atcaggaagt	gaagccctac	accctggcgt	tggctttcaa	540
agaacagatt	tgcctccagg	tcccagtgaa	tgaaaacgac	atgaaggtag	atgaagtcct	600
ttacgaagac	tcgtcaacag	cttaaactctg	gattactaca	gccaaataat	cagtgtttta	660
tatgagagta	aagcaaagta	tgtgtatttt	tcccttgtca	aaaattagtt	gaaattgttc	720
attaattgtga	atacagactg	catttttaaaa	ttgtaattat	gaaataacct	atataaaacc	780
atctttaaaa	accaatagaa	gtgtgaatag	tagaatatta	attaaaatgg	aggctatcag	840
cctgtgattt	tcagctt					857

<400> 17						
cccgcgagcg	tccatccatc	tgtccggccg	actgtccagc	gaaaggggct	ccaggccggg	60
cgcacgtcga	cccgggggac	cgaggccagg	agaggggcc	agagcgcggc	tgacccttgc	120
gggccggggc	aggggacggg	ggccgcggcc	atgcagtctt	gtgccagggc	gtggggggctg	180
cgcttgggcc	gccccgtcgg	ggggggccgc	cgcttggctg	ggggatcggg	gccgtgcttg	240
gcgccgcgga	gcccggacag	cagcagtggc	ggcggggaca	gcggcgcggc	tggggcctcg	300
cgcttcttgg	agcgccttct	gccagacac	gacgacttcg	ctcgaggcca	catcggccct	360
ggggacaaag	accagagaga	gatgctgcag	accttggggc	tggcgagcat	tgatgaattg	420
atcgagaaga	cggtccctgc	caacatccgt	ttgaaaagac	ccttgaaaaat	ggaagaccct	480
gtttgtgaaa	atgaaatcct	tgcaactctg	catgccattt	caagcaaaaa	ccagatctgg	540
agatcgtata	ttggcatggg	ctattataac	tgctcagtgc	cacagacgat	tttgcggaac	600
tctatggaga	actcaggatg	gatcaccac	tatactccat	accagcctga	ggtgtctcag	660
gggaggctgg	agaqtttact	caactaccag	accatggtgt	gtgacatcac	aggcctggac	720

atggccaatg	catccctgct	ggatgagggg	actgcagccg	cagaggcact	gcagctgtgc	780
tacagacaca	acaagaggag	gaaatattct	gttgatcccc	gttgccaccc	acagacaata	840
gctgttgtcc	agactcgagc	caaataatac	ggagtcctca	ctgagctgaa	gttaccctgt	900
gaaatggact	tcagtggaaa	agatgtcagt	ggagtgttgt	tccagtaccc	agacacggag	960
gggaagggtg	aagactttac	ggaactcgtg	gagagagctc	atcagagtgg	gagcctggcc	1020
tgctgtgcta	ctgacctttt	agcttttgtg	atcttgaggc	cacctggaga	atttggggta	1080
gacatcgccc	tgggcagctc	ccagagattt	ggagtgccac	tgggctatgg	gggaccccat	1140
gcagcatttt	ttgctgtccg	agaaaagctt	gtgagaatga	tgccctggaag	aatggtgggg	1200
gtaacaagag	atgccactgg	gaaagaagtg	tatcgtcttg	ctcttcaaac	cagggagcaa	1260
cacattcgga	gagacaaggc	taccagcaac	atctgtacag	ctcaggccct	cttggcgaat	1320
atggctgcca	tgtttcgaat	ctaccatggg	tcccatgggc	tggagcatat	tgctaggagg	1380
gtacataatg	ccactttgat	tttgtcagaa	ggtctcaagc	gagcagggca	tcaactccag	1440
catgacctgt	tctttgatac	cttgaagatt	catttgtggc	gctcagtga	ggaggtcttg	1500
ggcagggcgg	ctcagcggca	gatcaatttt	cggctttttg	aggatggcac	acttggtatt	1560
tctcttgatg	aaacagtcaa	tgaaaaagat	ctggacgatt	tgttgtggat	ctttggttgt	1620
gagtcactct	cagaactggg	tgctgaaagc	atgggagagg	agtgcagagg	tattccaggg	1680
tctgtgttca	agaggaccag	cccgttcctc	acccatcaag	tggtcaacag	ctaccactct	1740
gaaacaaaca	ttgtccggta	catgaagaaa	ctggaaaata	aagacatttc	ccttggttcc	1800
agcatgattc	cactgggata	ctgcaccatg	aaactgaaca	gttcgtctga	actcgacact	1860
atcacatgga	aagaattttg	aaacatccac	cccttttgtg	ctctggatca	agctcaagga	1920
tatcagcagc	ttttccgaga	gcttgagaag	gatttgtgtg	aactcacagg	ttatgaccag	1980
gtctgtttcc	agccaaacag	cggagcccag	ggagaatatg	ctggactggc	cactatccga	2040
gcctacttaa	accagaaagg	agaggggcac	agaacggttt	gcctcattcc	gaaatcagca	2100
catgggacca	acccagcaag	tgcccacatg	gcaggcatga	agattcagcc	tgtggagggtg	2160
gataaatatg	ggaatatcga	tgcaattcac	ctcaaggcca	tggtggataa	gcacaaggag	2220
aacctagcag	ctatcatgat	tacataacca	tccaccaatg	gggtgtttga	agagaacatc	2280
agtgcagtgt	gtgacctcat	ccatcaacat	ggaggacagg	tctacctaga	cggggcaaat	2340
atgaatgctc	aggtgggaat	ctgtcgccct	ggagacttcg	ggtctgatgt	ctcgccacta	2400
aatcttcaca	agacctttct	cattccccac	ggaggaggtg	gtcctggcat	ggggcccatc	2460
ggagtgaaga	aacatctcgc	cccgtttttg	cccaatcatc	ccgtcatttc	actaaagcgg	2520
aatgaggatg	cctgtcctgt	gggaaccgtc	agtgcggccc	catggggctc	cagttccatc	2580
ttgcccattt	cctgggctta	tatcaagatg	atgggaggca	agggtcttaa	acaagccacg	2640
gaaactgcga	tattaaatgc	caactacatg	gccaagcgat	tagaaacaca	ctacagaatt	2700
cttttcaggg	gtgcaagagg	ttatgtgggt	catgaattta	ttttggacac	gagacccttc	2760
aaaaagtctg	caaatattga	ggctgtggat	gtggccaaga	gactccagga	ttatggattt	2820
cacgccccta	ccatgtcctg	gcctgtggca	gggaccctca	tggtggagcc	cactgagtcg	2880
gaggacaagg	cagagctgga	cagattctgt	gatgccatga	tcagcattcg	gcaggaaatt	2940
gctgacattg	aggagggccg	catcgacccc	agggtcaatc	cgctgaagat	gtctccacac	3000
tccctgacct	gcgtttacatc	ttcccactgg	gaccggcctt	attccagaga	ggtggcagca	3060
ttcccactcc	ccttcatgaa	accagagaa	aaattctggc	caacgattgc	ccggattgat	3120
gacatatatg	gagatcagca	cctgggttgt	acctgcccac	ccatggaagt	ttatgagtct	3180
ccattttctg	aacaaaagag	ggcgtcttct	tagtcctctc	tccctaagtt	taaaggactg	3240
atttgatgcc	tctccccaga	gcatttgata	agcaagaaa	atttcatctc	ccacccagc	3300
ctcaagtagg	agttttatat	actgtgtata	tctctgtaat	ctctgtcaag	gtaaatgtaa	3360
atacagtagc	tggagggagt	cgaagctgat	ggttggaaga	cggatttgct	ttggtattct	3420
gcttccacat	gtgccagttg	cctggattgg	gagccatttt	gtgttttgcg	tagaaagttt	3480
taggaacttt	aactttta	gtggcaagtt	tgcatgtgtc	atagaggcta	tccctggagac	3540
ttaatagaca	tttttttggt	ccaaaagagt	ccatgtggac	tgtgccatct	gtgggaaatc	3600
ccagggcaaa	tgtttacatt	ttgtataccc	tgaagaactc	tttttctctc	aatatgccta	3660
atctgtaatc	acatttctga	gtgttttctc	ctttttctgt	gtgaggtttt	tttttttttt	3720
aatctgcatt	tattagtatt	ctaataaaa	cattttgatc	gg		3762

<210> 18
 <211> 1192
 <212> DNA
 <213> Homo sapiens

<400> 18

ggctccctcc	ggccgcgaac	tgccccctccc	cgccccgcct	cccggcgcg	gtggccgagg	60
cgtagcgccg	cgacccccgc	acccctgcga	acatggcgct	gcgagtgggtg	cggagcgtgc	120
gggcccctgct	ctgcaccctg	cgcgcgggtcc	cgttacccgc	cgcgccctgc	ccgccgaggc	180
cctggcagct	gggggtgggc	gccgtccgta	cgctgcgcac	tggacccgct	ctgctctcgg	240
tgcgtaaatt	cacagagaaa	cacgaatggg	taacaacaga	aatggcatt	ggaacagtgg	300
gaatcagcaa	ttttgcacag	gaagcggttg	gagatgttgt	ttattgtagt	ctccctgaag	360
ttgggacaaa	attgaacaaa	caagatgagt	ttggtgcttt	ggaaagtgtg	aaagctgcta	420
gtgaactata	ttctccttta	tcaggagaag	taactgaaat	taatgaagct	cttgcagaaa	480
atccaggact	tgtaaacaaa	tcttgttatg	aagatgggtg	gctgatcaag	atgacactga	540
gtaacccttc	agaactagat	gaacttatga	gtgaagaagc	atatgagaaa	tacataaaaat	600
ctattgagga	gtgaaaatgg	aactcctaaa	taaactagta	tgaataacg	aagccagcag	660
agttgtctta	aattagtggg	ggatagagac	ttagaataga	aacttttagt	attaccgatg	720
gggcaaaaaa	aaactactgt	taacactgct	aatgaaagaa	aatgcccttt	aactttgtaa	780
tgattataga	taaatataat	atgcgtcttt	ttcacaatat	cctatgattt	ttagactagg	840
ctctagtgtt	cagaattcat	gaaattatcc	atggtaaaaa	ctagttataa	aaattacata	900
attcaaagat	aacattgtta	ttcttaagcc	ttatataata	ttgtaacttg	catgtatcca	960
tacctggatt	tgggatgaaa	tacttaatga	tctttccatt	ggaaataact	ggaagtgaag	1020
aggttttgtt	gcttgtacag	tgtcagatga	ggaacaccac	tatcttaatt	ttgcgatata	1080
ctgcatttgc	tggtgctatt	tttatacagt	gaagcaacag	ctttgcagca	aaataataaa	1140
atacttcttc	gttaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aa	1192

<210> 19

<211> 2102

<212> DNA

<213> Homo sapiens

<400> 19

tgccacgcc	cccttcagat	cctttgctcc	ggagagagac	ctgtccgagc	agaggcctgg	60
actacatctc	ccggcgtgcc	tggcagtgtg	gtggcctctg	tgcgccgtct	gcactcgttg	120
caggcgacga	tgcagagggc	tgtaagtgtg	gtggcccgtc	tgggctttcg	cctgcaggca	180
ttccccccgg	ccttgtgtcg	tccacttagt	tgcgcacagg	aggtgctccg	caggacaccg	240
ctctatgact	tccacctggc	ccacggcggg	aaaatgggtg	cgtttgcggg	ttggagtctg	300
ccagtgcagt	accgggacag	tcacactgac	tcgcacctgc	acacacgcc	gcactgctcg	360
ctctttgacg	tgtctcatat	gctgcagacc	aagatacttg	gtagtgaccg	ggtgaagctg	420
atggagagtc	tagtggttgg	agacattgca	gagctaagac	caaaccaggg	gacactgtcg	480
ctgtttacca	acgaggctgg	aggcatctta	gatgacttga	ttgtaaccaa	tacttctgag	540
ggccacctgt	atgtgggtgc	caacgctggc	tgctgggaga	aagatttggc	cctcatgcag	600
gacaaggtca	gggagcttca	gaaccagggg	agagatgtgg	gcctggaggt	gttggataat	660
gccctgctag	ctctgcaagg	ccccactgca	gcccaggtac	tacaggccgg	cgtggcagat	720
gacctgagga	aactgccctt	catgaccagt	gctgtgatgg	aggtgttttg	cgtgtctggc	780
tgccgcgtga	cccgtgttgg	ctacacagga	gaggatggtg	tggagatctc	ggtgccggta	840
gcgggggcag	ttcacctggc	aacagctatt	ctgaaaaacc	cagaggtgaa	gctggcaggg	900
ctggcagcca	gggacagcct	gcgcctggag	gcaggcctct	gcctgtatgg	gaatgacatt	960
gatgaacaca	ctacacctgt	ggagggcgagc	ctcagttgga	caactggggaa	gcgccgccga	1020
gctgctatgg	acttcccttg	agccaagggtc	attgttcccc	agctgaaggg	caggggtgcag	1080
cggaggcgtg	tgggggttgat	gtgtgagggg	gccccatgc	gggcacacag	tcccatcctg	1140
aacatggagg	gtaccaagat	tggtactgtg	actagtggct	gcccctcccc	ctctctgaag	1200
aagaatgtgg	cgatgggtta	tgtgccctgc	gagtacagtc	gtccaggggac	aatgctgtctg	1260
gtagaggtgc	ggcggaagca	gcagatggct	gtagtacgca	agatgccctt	tgtgcccaca	1320
aactactata	ccctcaagtg	aagctggctc	aggggtggggc	tgcccttcc	aggagttttg	1380
cccctacaag	gggttagtca	agaagctgag	gcagaaactca	ctgggggtgg	gcagttaagg	1440
tggaggctga	ttctaattgt	ctggttgagg	ggccacacca	cctattcccc	ccacctaaact	1500
catgccattc	cagcttcctt	caggaccctg	cttctgagtg	acggaccagc	tcacacaatg	1560
tcttgtttca	gtccatgac	ccactgacct	actcttgctt	gctggagggt	aatgagaagc	1620
tttggttctg	ccatctctcc	cactctgcca	ggtgctggct	gtggagcaaa	ggctcacctt	1680
tgtggagagg	ataaaaacctg	cccaacctac	ctcaccatgg	tttttcacat	tgcaaagggt	1740

aataacatgg	gcagtgcgga	cttaggctac	cccctccagt	ttgctttccg	taaatgcaaa	1800
ttgtccttac	tgcaagtcag	gaatgattgc	tgactcacag	tagggctgct	atgcctgtgt	1860
gtaaacttgg	ggatggctga	gggaacatag	actcactctt	ccacattccc	aagttgggtct	1920
agtgtgctgc	ccagtagcaa	accatggcag	actcaccacc	tattctgagt	tccagggctg	1980
ctgtagggca	gggtgggctt	cctcccagac	ttgccttacc	ctgggctgat	ctttgcccct	2040
ggtatgcatt	aatggactcc	actgaatcct	gaaaaaaaaa	ttaaacttcc	ttcttacttg	2100
cc						2102

<210> 20
 <211> 3228
 <212> DNA
 <213> Homo sapiens

<400> 20						
aaaaaactca	ggcaaagtca	cagcctcaaa	attgttctact	gaaagaacgc	tgagtggaga	60
agtgtgagaa	gatgaatgga	cgggtggatg	gcttgtgtga	ccactctcta	agtgaaggag	120
tcttcatggt	cacatcggag	tctgtgggag	agggacaccc	ggataagatc	tgtgaccaga	180
tcagtgatgc	agtgtcggat	gcccattctca	agcaagaccc	caatgccaa	gtggcctgtg	240
agacagtgtg	caagaccggc	atggtgctgc	tgtgtgggtga	gatcacctca	atggccatgg	300
tggactacca	gcgggtggtg	agggacacca	tcaagcacat	cggctacgat	gactcagcca	360
agggtcttga	cttcaagact	tgcaacgtgc	tgggtggcttt	ggagcagcaa	tccccagata	420
ttgcccagtg	cgtccatctg	gacagaaatg	aggaggatgt	gggggcagga	gatcaggggt	480
tgatgttcgg	ctatgctacc	gacgagacag	aggagtgcac	gcccctcacc	atcatccttg	540
ctcacaagct	caacgcccgg	atggcagacc	tcaggcgctc	cggcctcctc	ccctggctgc	600
ggcctgactc	taagactcag	gtgacagttc	agtacatgca	ggacaatggc	gcagtcaccc	660
ctgtgcgcat	ccacaccatc	gtcatctctg	tgcagcacaa	cgaagacatc	acgctggagg	720
agatgcgcag	ggcctgaag	gagcaagtca	tcaggggccgt	ggtgccggcc	aagtacctgg	780
acgaagacac	cgtctaccac	ctgcagccca	gtgggcggtt	tgtcatcgga	ggtccccagg	840
gggatgcggg	tgtcactggc	cgtaagatta	ttgtgggacac	ctatggcggc	tggggggctc	900
atggtggtgg	ggccttctct	gggaaggact	acaccaaggt	agaccgctca	gctgcatatg	960
ctgcccgtcg	ggtggccaag	tctctgggtga	aagcagggct	ctgccggaga	gtgcttgtcc	1020
aggtttccta	tgccattggt	gtggccgagc	cgctgtccat	ttccatcttc	acctacggaa	1080
cctctcagaa	gacagagcga	gagctgctgg	atgtggtgca	taagaacttc	gacctccggc	1140
cgggcgtcat	tgtcagggat	ttggacttga	agaagcccat	ctaccagaag	acagcatgct	1200
acggccattt	cggaagaagc	gagttcccc	gggaggttcc	caggaagctt	gtattttaga	1260
gccaggggga	gctgggacct	gtctcaccct	ggaggcacct	ggtggccatg	ctcctcttcc	1320
ccagacgcct	ggctgctgat	cgccttcccc	accaccaaac	cctcagggca	aagccaggtc	1380
cctctcattt	agcctgtcc	gtcatcatca	tggccagctg	gaggcagggg	cttctctggtg	1440
ctggagggtt	gatcttgatg	taaggatggg	catggtgttc	tcctgctgct	ccctcagact	1500
ggggcaatgt	taatttagtg	gaaaaggcac	ccccgtcaag	agtgaattcc	ctcactcgtc	1560
tcccccaaca	gctggaccct	gaccagctcc	ccctccctcc	ccttgccctg	gccaggtgag	1620
gtcagcacat	ctcaacaggc	ctcagggctc	cttgtggggc	tgggctcctg	gacccccctt	1680
tcacaggcag	ccagtgcctt	gagccagggt	ctccagaaa	ccccaccag	gccaggcatg	1740
tggcaggggt	tagagcagga	ctgatgtctc	ctaagcacct	gtaatgtgcg	agggacccag	1800
ctaataactg	atctcgtttt	ttcttccactg	caacatgatg	aggtagtacc	ttttatatcc	1860
catttataga	tgggggaaag	caaagcacag	agagtctgga	taacttccac	agggteccac	1920
agccacgtgt	ttagacctag	atgtataact	aggagctttg	actcaggagc	ctgtgacata	1980
cccccttccc	caccgttgct	tcattgccagt	aacaggctca	aacaatgaca	aagcagattc	2040
agaaatgagg	ccatggactc	tgtcctgaag	gcctgaggtt	actggaaatt	aggggattaa	2100
cccactagct	cttgttgagc	cgtgggcaat	tgtctgaaaa	gtgaagacag	aaccacaggg	2160
ctattttgtt	tgcttcatgt	gtcccagaag	atgactgagg	gtgagttggc	ttacctggcc	2220
catcagggta	ggctggagtt	agggactgac	cagcagcttt	agaatcccag	ccccctgacc	2280
actcagagac	atgcagagat	tgggtttttt	gacttctggg	gtaagtggtc	taagtccagt	2340
ccagtccctat	gtgggcttcc	tggagcagaa	gcagcaactt	gtcctagcac	agatggccag	2400
ccccttagac	agaggccctc	aagtctttct	ctttccctgg	tccttgtat	cccctgcagg	2460
ctgagtgcac	ttggagggag	tgagtggccc	tttcggatcc	agggaggctg	gtcctatggc	2520
ctcatgttaa	ataggcgggg	cttgccttct	ggtgttggac	aagcttctga	gacgtcatga	2580

ggagattctg	cctttgccag	gtgactgtct	ggggagcggg	tctgctccca	aggggcctga	2640
gcagtccttg	gcctgctaag	gtcttggaac	ttgcctgcct	ttccatccat	ggccagcagc	2700
acctgcccta	cctgccccac	ttgtccttag	cctggacctc	tgacagcagc	atctctacct	2760
tctccccagc	tcccaggacc	acaggctcag	gcagggcctc	catgggccc	aggggaacac	2820
tggggacttg	gcctctctct	agggtacatg	gtgctgggag	aggcagccca	ggaagtctca	2880
tctggggagc	aggcagccag	catctgggcc	ttggcctgga	gcacaaagac	cctggctttc	2940
atthttctctc	aggtgaaagg	aaattaaggc	aacaaaagaa	gcccggtcc	tggtcaccta	3000
ggaagcctca	gattccttc	catggaagga	gggagtggtt	tgcaggtggc	caagttcctc	3060
taacttggct	cacactgcac	atgaaaattc	agaattttat	actttcccta	ccctctagag	3120
aaataagatc	ttttttgtca	gtttgtttgt	atgaaactaa	agctttattt	gttaatatgtt	3180
cctgctaaaa	caatgaataa	aaactcaagg	agcaactaaa	aaaaaaaa		3228

```
<210> 21
<211> 344
<212> PRT
<213> Homo sapiens
```


<210> 23
<211> 3259
<212> DNA
<213> Homo sapiens

<400> 23

caaggttgggt	ggaagtcgcg	ttgtgcaggt	tcgtgcccgg	ctggcgcgggc	gtgggtttcac	60
tggtacatgc	cttgaagtga	tgaggaggtt	tctgttacta	tatgctacac	agcagggaca	120
ggcaaaggcc	atcgcagaag	aaatgtgtga	gcaagctgtg	gtacatggat	tttctgcaga	180
tcttcactgt	attagtgaat	ccgataagta	tgacctaaaa	accgaaacag	ctcctcttgt	240
tgttgtgggt	tctaccacgg	gcaccggaga	cccacccgac	acagcccgca	agttttgttaa	300
ggaaatacag	aaccaaacac	tgccgggtga	tttctttgct	cacctgcggt	atgggttact	360
gggtctcggt	gattcagaat	acacctactt	ttgcaatggg	gggaagataa	ttgataaacg	420
acttcaagag	cttggagccc	ggcattttcta	tgacactgga	catgcagatg	actgtgtagg	480
tttagaactt	gtggttgagc	cgtggattgc	tggactctgg	ccagccctca	gaaagcattt	540
taggtcaagc	agaggacaag	aggagataag	tggcgcactc	ccggtggcat	cacctgcac	600
cttgaggaca	gaccttgtga	agtcagagct	gctacacatt	gaatctcaag	tcgagcttct	660
gagattcgat	gattcaggaa	gaaaggattc	tgaggttttg	aagcaaaatg	cagtgaacag	720
caaccaatcc	aatggtgtaa	ttgaagactt	tgagtcctca	cttaccctgt	cggtagcccc	780
actctcacia	gcctctctga	atatttcctg	tttaccctca	gaatatttac	aggtacatct	840
gcaggagtct	cttggccagg	aggaaagcca	agtatctgtg	acttcagcag	atccagtttt	900
tcaagtgcc	atttcaaagg	cagttcaact	tactacgaat	gatgccataa	aaaccactct	960
gctggtagaa	ttggacattt	caaatacaga	cttttcctat	cagcctggag	atgccttcag	1020
cgtgatctgc	cctaacagtg	attctgaggt	acaaaagccta	ctccaaagac	tgcagcttga	1080
agataaaaga	gagcactgcg	tcctttttgaa	aataaaaggca	gacacaaaga	agaaaggagc	1140
taccttacc	cagcatatac	ctgcggggatg	ttctctccag	ttcattttta	cctgggtgtct	1200
tgaaatccga	gcaattccta	aaaaggcatt	tttgcgagcc	cttgtggact	ataccagtga	1260
cagtgtctgaa	aagcgagggc	tacaggagct	gtgcagttaa	caaggggagc	cggattatag	1320
ccgctttgta	cgagatgcct	gtgcctgctt	gttggtatctc	ctcctcgctt	tccttctctg	1380
ccagccacca	ctcagtctcc	tgctcgaaca	tcttcctaaa	cttcaaccca	gaccatattc	1440
gtgtgcaagc	tcaagtttat	ttcaccaggg	aaagctccat	tttgtcttca	acattgtgga	1500
atttctgtct	actgccacaa	cagagggttct	gcggaaggga	gtatgtacag	gctggctggc	1560
cttgttgggt	gcttcagttc	ttcagccaaa	catacatgca	tcccatgaag	acagcgggaa	1620
agccctgggt	cctaagatat	ccatctctcc	tcgaacaaca	aattctttcc	acttaccaga	1680
tgacccctca	atcccatca	taatggtggg	tccaggaacc	ggcatagccc	cgtttatttg	1740
gttcctacaa	catagagaga	aactccaaga	acaacaccca	gatggaaatt	ttggagcaat	1800
gtgggtgttt	tttggctgca	ggcataagga	tagggattat	ctattcagaa	aagagctcag	1860
acatttcctt	aagcatggga	tcttaactca	tctaaagggt	tccttctcaa	gagatgctcc	1920
tggtggggag	gaggaagccc	cagcaaagta	tgtacaagac	aacatccagc	ttcatggcca	1980
gcagggtggc	agaatcctcc	tccaggagaa	cggccatatt	tatgtgtgtg	gagatgcaaa	2040
gaatatggcc	aaggatgtac	atgatgccct	tgtgcaataa	ataagcaaag	agggtggagt	2100
tgaaaaacta	gaagcaatga	aaaccctggc	cactttaaaa	gaagaaaaac	gctaccttca	2160
ggatatttgg	tcataaaaacc	agaaattaaa	gaaagaggat	taagcttttt	tgactgaaag	2220
tactaaaagt	cagctttact	agtgccaaac	ctttaaat	tcaaaagaaa	attttctttc	2280
aacatttctt	gaaggacatg	gagtggagat	tggatcattt	aacaatataa	caaaacttcc	2340
tgatttgatt	ttacgtatct	tctatctacg	cccttcctgt	gcctgtgact	ctcccaaat	2400
tgccctgttg	ccttgagctc	ttctgagcta	aaggcagcct	tcagtcctca	tcagcgctc	2460
ctttacttcc	cagagaactt	cacagagact	ctgtccttcc	atgcaaaggc	ttcctgaaat	2520
aggggagact	gactgagtag	ctcattcttg	tgacttacag	tgccaacatt	taaaaaagta	2580
tgaaaatgat	ttatttttat	atgatgtata	cccataaaga	atgtcatat	taatgtactt	2640
aaattacaca	tgtagagcat	atctgttata	tgtttatgta	actatcaaat	ggttatttgt	2700
tactaaagct	atatttctga	taaaaaatat	tttaggataa	ttgcctacag	agggatttat	2760
ttttatgatg	ctgggaaata	tgaaatgtat	tttaaaattt	cactctgggc	atatggattt	2820
atctatcacc	attacttttt	tttaagtcac	aatttcagaa	ttttgggaca	tttgatttca	2880
atttacaggt	accagtacgt	acataatttt	atagaaaagt	acaacctttt	tattttcact	2940
ccttttattt	ctgctgcttg	gcacattttt	gagttttccc	acattatttg	tctccatgat	3000
accactcaag	cagtgtgctg	gacctaaaat	actgacttta	gttagtatcc	ttggattttt	3060

005'4'25" 052'30"

agattcccca	gtgtctaatt	ccctgttata	atgtgcacaa	acaaaacaaa	atgttatgat	3120
aatcttttctc	cactgttcta	atatatattg	tatttttatt	tgatagcttg	ggatttaaaa	3180
catctctgtt	gaaggctttt	gatacctttt	agaaataaag	atctgaaaga	aatggcataa	3240
tcttaaaaaa	aaaaaaaaa					3259

<210> 24
 <211> 1805
 <212> DNA
 <213> Homo sapiens

<400> 24

aagagactga	actgtatctg	cctctatttc	caaaagactc	acgttcaact	ttcgctcaca	60
caaagccggg	aaaattttat	tagtcctttt	tttaaaaaaa	gttaatataa	aattatagca	120
aaaaaaaaaa	ggaacctgaa	ctttagtaac	acagctggaa	caatcgcagc	ggcggcggca	180
gcggcgggag	aagaggttta	atttagttga	ttttctgtgg	ttgttggttg	ttcgctagtc	240
tcacggtgat	ggaagctgca	catttttttcg	aagggaccga	gaagctgctg	gaggtttggg	300
tctcccggca	gcagcccgcac	gcaaaccaag	gatctgggga	tcttcgcact	atcccaagat	360
ctgagtggga	catacttttg	aaggatgtgc	aatggttcaat	cataagtgtg	acaaaaactg	420
acaagcagga	agcttatgta	ctcagtgaga	gtagcatggt	tgtctccaag	agacgtttca	480
ttttgaagac	atgtggtacc	accctcttgc	tgaaagcact	ggttcccctg	ttgaagcttg	540
ctagggatta	cagtgggttt	gactcaattc	aaagcttctt	ttattctcgt	aagaatttca	600
tgaagccttc	tcaccaaggg	taccacaccc	ggaattttcca	ggaagaaata	gagtttctta	660
atgcaatttt	cccaaattga	gcaggatatt	gtatgggacg	tatgaattct	gactgttggg	720
acttatatac	tctggatttc	ccagagagtc	gggtaatcag	tcagccagat	caaaccttgg	780
aaattctgat	gagtgaagctt	gacccagcag	ttatggacca	gttctacatg	aaagatgggtg	840
ttactgcaaa	ggatgtcact	cgtgagagtg	gaattcgtga	cctgatacca	ggttctgtca	900
ttgatgccac	aatggttcaat	ccttgtgggt	attcgatgaa	tggaatgaaa	tcggatggaa	960
cttattggac	tattcacatc	actccagaac	cagaattttc	ttatgtagc	tttgaaacaa	1020
acttaagtca	gacctcctat	gatgacctga	tcaggaaagt	tgtagaagtc	ttcaagccag	1080
gaaaatttgt	gaccaccttg	tttgtaatac	agagttctaa	atgtcgcaca	gtgcttgctt	1140
cgccccagaa	gattgaagg	tttaagcgtc	ttgattgcca	gagtgcctatg	ttcaatgatt	1200
acaattttgt	ttttaccagt	tttgctaaga	agcagcaaca	acagcagagt	tgattaagaa	1260
aaatgaagaa	aaaacgcaaa	aagagaacac	atgtagaagg	tggtggatgc	tttctagatg	1320
tcgatgctgg	gggcagtgtc	ttccataacc	accactgtgt	agttgcagaa	agccctagat	1380
gtaatgatag	tgtaatcatt	ttgaattgta	tgcattatta	tatcaaggag	ttagatatct	1440
tgcataaatg	ctctcttctg	tgttttaggt	ttctctgcca	ctcttgctgt	gaaattgaag	1500
tggtatgtag	aaaaaccttt	tactatatga	aactttacaa	cacttggtgaa	agcaactcaa	1560
tttggtttat	gcacagtgt	atatttctcc	aagtatcatc	caaaattccc	cacagacaag	1620
gctttcgtcc	tcattaggtg	ttggcctcag	cctaaccctc	taggactgtt	ctattaaatt	1680
gctgccagaa	ttttacatcc	agttacctcc	actttctaga	acataattctt	tactaatgtt	1740
attgaaacca	atttctactt	catactgatg	tttttggaag	cagcaattaa	agtttttctt	1800
ccatg						1805

<210> 25
 <211> 254
 <212> PRT
 <213> Homo sapiens

<400> 25

Gln	Asp	Ile	Leu	Val	Phe	Arg	Ser	Lys	Thr	Tyr	Gly	Asn	Val	Leu	Val
1					5				10					15	
Leu	Asp	Gly	Val	Ile	Gln	Cys	Thr	Glu	Arg	Asp	Glu	Phe	Ser	Tyr	Gln
			20					25					30		
Glu	Met	Ile	Ala	Asn	Leu	Pro	Leu	Cys	Ser	His	Pro	Asn	Pro	Arg	Lys
	35						40					45			

Val Leu Ile Ile Gly Gly Gly Asp Gly Gly Val Leu Arg Glu Val Val
50 55 60

Lys His Pro Ser Val Glu Ser Val Val Gln Cys Glu Ile Asp Glu Asp
65 70 75 80

Val Ile Gln Val Ser Lys Lys Phe Leu Pro Gly Met Ala Ile Gly Tyr
85 90 95

Ser Ser Ser Lys Leu Thr Leu His Val Gly Asp Gly Phe Glu Phe Met
100 105 110

Lys Gln Asn Gln Asp Ala Phe Asp Val Ile Ile Thr Asp Ser Ser Asp
115 120 125

Pro Met Gly Pro Ala Glu Ser Leu Phe Lys Glu Ser Tyr Tyr Gln Leu
130 135 140

Met Lys Thr Ala Leu Lys Glu Asp Gly Val Leu Cys Cys Gln Gly Glu
145 150 155 160

Cys Gln Trp Leu His Leu Asp Leu Ile Lys Glu Met Arg Gln Phe Cys
165 170 175

Gln Ser Leu Phe Pro Val Val Ala Tyr Ala Tyr Cys Thr Ile Pro Thr
180 185 190

Tyr Pro Ser Gly Gln Ile Gly Phe Met Leu Cys Ser Lys Asn Pro Ser
195 200 205

Thr Asn Phe Gln Glu Pro Val Gln Pro Leu Thr Gln Gln Gln Val Ala
210 215 220

Gln Met Gln Leu Lys Tyr Tyr Asn Ser Asp Val His Arg Ala Ala Phe
225 230 235 240

Val Leu Pro Glu Phe Ala Arg Lys Ala Leu Asn Asp Val Ser
245 250

<210> 26
<211> 2211
<212> DNA
<213> Homo sapiens

<400> 26
ctgaggccca gcccccttcg cccgtttcca tcacgagtgc cgccagcatg tctgacaaac 60
tgccctacaa agtcgccgac atcggcctgg ctgcctgggg acgcaaggcc ctggacattg 120
ctgagaacga gatgccgggc ctgatgcgta tgcgggagcg gtactcggcc tccaagccac 180
tgaaggcgcg ccgcatcgct ggctgcctgc acatgaccgt ggagacggcc gtcctcattg 240
agaccctcgt caccctgggt gctgaggtgc agtgggtccag ctgcaacatc ttctccaccc 300
agaaccatgc ggcggtgc attgccaaagg ctggcattcc ggtgtatgcc tggaagggcg 360
aaacggacga ggagtacctg tgggtgcattg agcagaccct gtacttcaag gacggggccc 420
tcaacatgat tctggacgac gggggcgacc tcaccaacct catccacacc aagtaccgcg 480
agcttctgcc aggcattccga ggcattctctg aggagaccac gactgggggc cacaacctct 540
acaagatgat ggccaatggg atcctcaagg tgcctgccat caatgtcaat gactccgtca 600

atagaattac	aaatagcact	tgataatttt	aaagtatgtt	ttagaaattt	tcttaggagc	1440
aaaataagta	caaagtaaat	cttgaacagg	ttcactaagc	accacccttg	tgaaaagtat	1500
tatggaaatc	actgcagcac	aggaaaagta	attcagatgt	taatgccact	tgaagaagtt	1560
ggtaggctag	caaagaggat	gagacatgaa	ctgtcataaa	ggactcagca	accagccagg	1620
gacagataaa	gcgctatgga	aaggggcttc	caagttcttt	tgaacatgac	ccttagtaac	1680
aaacacaatt	tatataatga	cccagcaaaa	cacatcacat	cttactgtcg	aaattaaatg	1740
tgtgatccat	cctagtattt	tctgtttccat	tctttttcat	tctattttcat	ttataaaaac	1800
tgctagttag	gactttttca	atggattttt	atgacctcat	actgggtttg	gatccacagt	1860
ttgaaaaata	ttgctacaag	acacttaagg	agaccatcct	gtttaagttt	attcctataa	1920
gtaggtcagt	catatgagac	ctgatcaata	aatatccaat	accagaggtc	ctgctctcag	1980
agttcttctg	tttcgtgacc	cactttttct	ccagtaaaag	acatagacca	atggggagga	2040
ggggaggaga	gatggatatt	tcagccctct	ccatcctagt	caacactgga	tccacctagt	2100
gcctctgggc	cataaggctg	agcagagtga	gcttgattaa	gttggtagct	tttaaaaaat	2160
ataataaaaa	aaaagtagag	attctccaaa	ctctagcctg	gtttcctaga	ttgagaacta	2220
tgatattttt	ctctgataat	ttaatatact	ctctctaca	aaagctcaag	cctgaagata	2280
caagactatt	agaagaataa	tgactaccct	cagtgtatta	gaaaagaggt	catgcagctt	2340
tctaacaatt	attgaattgt	ttgagctgtt	tgaaatttgt	aattcttttc	agctattaaa	2400
aagaagagca	atgagaaaaa	aaaaaaaaaa	aaaaaa			2436

```
<210> 28
<211> 1326
<212> DNA
<213> Homo sapiens
```

<400> 28						
ttcttttttctt	ctctttctttct	ttcgcgggttc	agcatgcagg	aaaaagacgc	ctcctcacia	60
ggttttcctgc	cacactttcca	acattttcgcc	acgcaggcga	tccatgtggg	ccaggatccg	120
gagcaatgga	cctccagggc	tgtagtgcce	cccatctcac	tgtccaccac	gttcaagcaa	180
ggggcgccctg	gccagcactc	gggtttttgaa	tatagccgtt	ctggaaatcc	cactaggaat	240
tgccttgaaa	aagcagtggc	agcactggat	ggggctaagt	actgttttggc	ctttgtcttc	300
ggttttagcag	ccactgtaac	tattaccat	cttttaaaag	caggagacca	aattatttgt	360
atggatgatg	tgtatggagg	tacaacacag	tacttcaggc	aagtggcatt	tgaatttgga	420
ttaaagattt	ctttttgttg	ttgtttccaa	atcaaattac	tagaggcagc	aattacacca	480
gaaaccgaagc	ttgtttggat	cgaaccccc	acaaacccca	cccagaaggt	gattgacatt	540
gaaggctgtg	cacatattgt	ccataagcat	ggagacatta	ttttggctgt	ggataacact	600
tttatgtcac	catattttcca	gcgccctttg	gctctgggag	ctgatatttc	tatgtattct	660
gcaacaaaat	acatgaatgg	ccacagtgat	gttgtaatgg	gcctgggtgtc	tgtaatttgt	720
gaaagccttc	ataatagact	tcgtttcttg	caaaactctc	ttggagcagt	tcattctctc	780
attgatttgt	acctctgcaa	tcgaggtctg	aagactctac	atgtccgaat	ggaaaagcat	840
ttcaaaaacg	gaatggcagt	tgcccagttc	ctggaatcta	atccttgggt	agaaaaggtt	900
atttatcctg	ggctgccttc	tcattccacag	catgagttgg	tgaagcgtca	gtgtacaggt	960
tgtacagggg	tggtcacctt	ttatattaag	ggcactcttc	agcatgctga	gattttcttc	1020
aagaacctaa	agctattttac	tctggccgag	agcttgggag	gattcgaaag	ccttgctgag	1080
cttccggcaa	tcatgactca	tgcattcagtt	cttaagaatg	acagagatgt	ccttggaatt	1140
agtacacac	tgattcgact	ttctgtgggc	ttagaggatg	aggaagacct	actggaagat	1200
ctagatcaag	ctttgaaggc	agcacacctt	ccaagtggaa	ttcacagcta	gtattccaga	1260
gctgctatta	gaagctgctt	cctgtgaaga	tcaatcttcc	tgagtaatta	atggaccaac	1320
aatgag						1326

```
<210> 29
<211> 49
<212> DNA
<213> Artificial Sequence
```

<220>
<223> Description of Artificial Sequence:PCR product

<400> 29
cccacggtcg ggggtacctgg gcggggacgcg ccaggccgac tcccggcgga

49

<210> 30
<211> 3464
<212> DNA
<213> Homo sapiens

<400> 30
tttaatggac acataattta attatatatt ttttcttaca gatacccagg tgtttctctct 60
gatgtccagg aggagaaagg cattaagtac aaatttgaag tatatgagaa gaatgattaa 120
tatgaagggtg ttttctagtt taagttgttc cccctccctc tgaaaaaagt atgtattttt 180
acattagaaa aggtttttttg ttgacttttag atctataatt atttctaagc aactagtttt 240
tattccccac tactcttgct tctatcagat accattttatg agacattctt gctataacta 300
agtgtcttctc caagacccca actgagtccc cagcacctgc tacagtgagc tgccattcca 360
caccatcac atgtggcact cttgccagtc cttgacattg tcgggctttt cacatgttgg 420
taatatttat taaagatgaa gatccacata cccttcaact gagcagtttc actagtggaa 480
ataccaaaag cttcctacgt gtatatccag aggtttgtag ataaatgttg ccacctgtt 540
tgtaacagtg aaaaattgaa aacaacctgg aagtccagtg atgggaaaat gagtatgttt 600
ctgtcttaga ttggggaacc caaagcagat tgcaagactg aaatttcagt gaaagcagtg 660
tatttgctag gtcataccag aaatcatcaa ttgaggtacg gagaaactga actgagaagg 720
taagaaaagc aatttaaagt cagcgagcag gttctcattg ataacaagct ccatactgct 780
gagatacagg gaaatggagg ggggaaagct ggagtattga tcccgcccc ctccttggtt 840
gtcagctccc tgtcctgtgt gtgggcgga catagtccag ctgctctata gcaagtctca 900
ggtgtttgca gtaagaagct gctggcatgc acgggaacag tgaatgcaa acacttaaag 960
caattcgatg tttaagtatg taagttcttt tttttttaga cagcgtttcg ctcttggtgc 1020
ccaggctagc atgcaatggt gtgacctcgg cttactgcaa cctccgcctt ccagattca 1080
agcgattctc ctgacctcagg ctcccaagta gctaggacca ggtgcgcgcc accacgccg 1140
gctaattttt gtattttgta ttttttagtag agatgggggtt tcaccatgtt ggtcaggcta 1200
gtctcgaact cgtgaccgca agcgattcac ccacctcagc ctcccaaagt gctgggatta 1260
ccggcttgag ccaccacacc cggcacatct tcattctttt tatgtagtaa aaagtataag 1320
gccacacatg gtttatttga agtattttat aatttaaaaa aatacagaag caggaaaacc 1380
aattataagt tcaagtgagg gatgatggtt gcttgaacca aagggttgca tgtagtaaga 1440
aattgtgatt taagatatat tttaaagtta taagtagcag gatattctga tggagtttga 1500
ctttggtttt gggcccaggg agtttcagat gcctttgaga aatgaatgaa gtagagagaa 1560
aataaaaaga aaaccagcca ggcacagtgg ctcacacctg taatcccagc gctttgggag 1620
gctaaggcag gcagatcact tgagaccagc ttgggcaaca tggcaaagcc ccatctctac 1680
aaaaaacaca aaaattagct gggcattgtg gcgcacacct gtattcccat ctagtccagga 1740
agctgagatg gaagaattaa ttgagccac gagttcaagg ctgcagttag tcgtgattgt 1800
gccactgcac tccagccggg gtgacagaag agacctgtc tcgaaaacga atctgaaaac 1860
aatggaacca tgccttcata attctagaaa gttattttca actgataaat ctatattcac 1920
ccaaataatc aagggtgaag gtaaaataat acatttttag acaagcaaag actcaggggt 1980
tacctccatg tgcccttttt agggaagctg ttggagaaaa tactccagca aaatgaagga 2040
gtacacaaac cagagaatga catgaatcca gcaaatagga tccaacacag gcaatattcc 2100
agctatggag ctagctttta aaaggaacag taaaaatatt aatcggttag ctgggtggaa 2160
tggcccatgc ctgtagtccc agctactcag gaggtcagc agcaggacga cttgagccca 2220
agagttccag accagcctgg ccaccttagt gagatccctt ctcttaaaaa taataactta 2280
ttgccagatt tggggcattt ggaaagaagt tcattgaaga taaagcaaaa gtaaaaaaaa 2340
aaaaaaaaaa aacaagggga aagggttggg taggcaatca ttctagggca gaaagaagta 2400
caggatagga agagcataat acactgtttt tctcaacaag gagcagtatg tacacagtca 2460
taatgatgtg actgcttagc ccctaaatat ggtaactact ctgggacaat atgggaggaa 2520
aagtgaagat tgtgatggtg taagagctaa tcctcatctg tcatatccag aaatcactat 2580
ataatatata ataatgaaat gactaagtta tgtgaggaaa aaaacagaag acattgctaa 2640
aagagttaaa agtcattgct ctggagaatt aggagggatg gggcagggga ctgttaggat 2700
gcattataaa ctgaaaagcc tttttaaaat tttatgtatt aatatatgca ttcacttgaa 2760
aaactaaaaa aaaacaataa ttgggaaaaa cccatgaagg taactaacgg aaggaaaaac 2820
taagagaatg aaaagtattt gcctctggaa agaacaactg gcaggactgt tgttttcatt 2880

0957259.052300

<210> 35
<211> 1637
<212> DNA
<213> Homo sapiens

<400> 35
aagaactggc ctgtacattt tcaaggaatt cttgagaggt tcttggagag attctgggag 60
ccaaacactc cattgggatc ctagtctgtt tagagaacaa cttgtaatgg agccttcatc 120
tcttgagctg ccggctgaca cagtgcagcg cattgcggct gaactcaaat gccacccaac 180
ggatgagagg gtggctctcc acctagatga ggaagataag ctgaggcact tcagggagtg 240
cttttatatt cccaaaatac aggatctgcc tccagttgat ttatcattag tgaataaaga 300
tgaaaatgcc atctatttct tgggaaattc tcttggcctt caacccaaaaa tggttaaaac 360
atatcttgaa gaagaactag ataagtgggc caaaatagca gcctatgggc atgaagtggg 420
gaagcgtcct tggattacag gagatgagag tattgtaggc cttatgaagg acattgtagg 480
agccaatgag aaagaaatag ccctaatagaa tgctttgact gtaaatttac atcttctaata 540
gttatcattt tttaagccta cgccaaaacg atataaaaatt cttctagaag ccaaagcctt 600
cccttctgat cattatgcta ttgagtcaca actacaactt cacggactta acattgaaga 660
aagatgcgg atgataaagc caagagaggg ggaagaaacc ttaagaatag aggatatcct 720
tgaagtaatt gagaagggaag gagactcaat tgcagtgatc ctgttcagtg ggggtgcattt 780
ttactactgga cagcacttta atattcctgc catcacaaaaa gctggacaag cgaagggttg 840
ttatgttggc tttgatctag cacatgcagt tggaaatgtt gaactctact tacatgactg 900
gggagttgat tttgcctgct ggtgttctca caagtattta aatgcaggag caggaggaat 960
tgctggtgcc ttcattcatg aaaagcatgc ccatacgatt aaactgcat tagtgggatg 1020
gtttggccat gaactcagca ccagatttaa gatggataac aaactgcagt taatccctgg 1080
ggtctgtgga ttccgaattt caaatcctcc cattttgttg gtctgttctt tgcattgctag 1140
tttagagatc tttaagcaag cgacaatgaa ggcattgcgg aaaaaatctg ttttgctaac 1200
tggctatctg gaataacctga tcaagcataa ctatggcaaa gataaagcag caaccaagaa 1260
accagttgtg aacataatta ctccgtctca tgtagaggag cgggggtgcc agctaacaat 1320
aacatttttct gttccaaaca aagatgtttt ccaagaacta gaaaaaagag gagtggtttg 1380
tgacaagcgg aatccaaatg gcattcgagt ggctccagtt cctctctata attctttcca 1440
tgatgtttat aaatttacca atctgtctac ttctatactt gactctgcag aaacaaaaaa 1500
ttagcagtg tttctagaac aacttaagca aattatactg aaagctgctg tggttatttc 1560
agtattattc gatttttaat tattgaaagt atgtcaccat tgaccacatg taactaacaa 1620
taaataatat accttac 1637

<210> 36
<211> 1908
<212> DNA
<213> Homo sapiens

<400> 36
gaattcatga aaacgtagct cgtcctcaaa aaaaacagaa gaggagtaat cattttaagg 60
gagaaatata tacgaaagga acaagatttt gaagcaccga agctgccacc tacattaaaa 120
cacggtaggt ggctaaacac cagtcttcaa tgcccttcca cagcctcagt ctgaaaaata 180
ctgtgcaggt gacccaagtg aggggtcacc cttgggcttt tcctgtggca gtatctcttg 240
tttaaaaaa aacaaacgta cttattgcgt tgaaggacgg caacaggaag gactccatga 300
ttagtcacat ctataccatc ctaagaaact ttatccaccc aaactgtatt tcagacttta 360
taatctaaac tacaaaaagt gttcactggg gaactgcaca atatgactgc ttttaaccgt 420
agtgatttca aatattgagc catgctgttg cagtcttaaa aactggagac ctaagggcag 480
ctttcttcta gtcacccaat ccagcacttt tttaaaaaat cagtaaaact cttcgaccac 540
caaggaaaaa aaaaaaggat ggagggttaa agacgcaccc ctgcccaca agccccctca 600
tcagaatggg agtcaggaga cctgagttcc tgtctcaggc ctgccattaa aaactgcat 660
aacctttgcc tatctcctca aacggaagta ctaaaacctc agcgcttcac ccaatttgta 720
gccccggctg ggctcttccc accttcccct tcttcagccc gcccttctt cctccagccc 780
tatcatcggg cggagggtcc ccgcctccgc ccgccttacc cacaagcccc gccccccgag 840
ccccgatggc cctgcccatc ccagacagca acctactacg tgcggcggca gctggggcgg 900
gaaggcgggc gctggggggc ctgcggccgc tgcagcgcag ggtccacctg gtcggctgca 960

cctgtggagg	aggaggtgga	tttcaggctt	cccgtagact	ggaagaatcg	gctcaaaacc	1020
gcttgccctcg	caggggctga	gctggaggca	gcgaggccgc	ccgacgcagg	cttccggcga	1080
gacatggcag	ggcaaggatg	gcagcccggc	ggcagggccc	ggcgaggagc	gcgaaccgcg	1140
ggccgcagtt	cccaggcgtc	tgcgggcgcg	agcacgccgc	gaccctgcgt	gcgccggggc	1200
gggggggcgg	ggcctcgcct	gcacaaatag	ggacgagggg	gcggggcggc	cacaatttcg	1260
cgccaaactt	gaccgcgcgt	tctgtctgtaa	cgagcgggct	cggaggtcct	cccgtctgtg	1320
tcatggttgg	ttcgctaaac	tgcctcgtcg	ctgtgtccca	gaacatgggc	atcggcaaga	1380
acggggacct	gccttggcca	ccgtcacagt	atctgccggg	ccggggcgat	gggacccaaa	1440
cgggcgcagg	ctgcccacgg	tcgggggtacc	tgggcggggac	gcgccggccg	actcccggcg	1500
agaggatggg	gccagacttg	cggctctgcgc	tggcaggaag	ggtgggcccc	actggatttc	1560
ccttttctgc	tgcgcgggag	gcccagttgc	tgatttctgc	ccggattctg	ctgcccgggtg	1620
aggtcttgcc	ctgcggcgcc	ctcgcgccagg	gcaaagtccc	agccctggag	aaaacacctc	1680
acccttacc	acagcgctcc	gtttgtcagg	tgccttagag	ctcgagccca	agggataatg	1740
tttcgagtaa	cgtcttttct	ctaacttgta	ggaatgaatt	cagatatattc	cagagaatga	1800
ccacaacctc	ttcagatgaa	ggtaatgtgg	gattaagtag	ggctcttgctt	gatgaagttt	1860
accagtgcaa	atgttagtta	aatggaaaagt	tttccgtggt	aatctggg		1908

<210> 37

<211> 30

<212> DNA

<213> Artificial Sequence

$\langle 220 \rangle$

<223> Description of Artificial Sequence:primer

<400> 37

cccacggtcg gggtaggccga ctcccgggcga

30

<210> 38

$\langle 211 \rangle$ 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 38

ctaaactgca tcgtcgctgt g

21

<210> 39

<211> 19

<212> DNA

<213> Artificial Sequence

$\langle 220 \rangle$

<223> Description of Artificial Sequence:primer

<400> 39

aaaaggggaa tccagtcgg

19

$\langle 210 \rangle$ 40

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR product

<400> 40
acctggggcgg gacgcgcca

19

<210> 41
<211> 1275
<212> DNA
<213> Homo sapiens

<400> 41
ctgcagcgcc aggggtccacc tgggtcggctg cacctgtgga ggaggaggtg gatttcaggc 60
ttcccgtaga ctggaagaat cgggtcaaaa ccgcttgccct cgcaggggct gagctggagg 120
cagcgaggcc gcccgacgca ggcttccggc gagacatggc agggcaagga tggcagccc 180
gcggcagggc ccggcgagga gcgcgaaccc gcggccgcag ttcccaggcg tctgcgggcg 240
cgagcacgcc gcgaccctgc gtgcgcgggg gcggggggggc ggggcctcgc ctgcacaaat 300
agggacgagg gggcgggggc gccacaattt cgcgcctaac ttgaccgcgc gttctgctgt 360
aacgagcggg ctcgagggtc ctcccgtgc tgatcatggt ggctcgctaa actgcatcgt 420
cgctgtgtcc cagaacatgg gcatcggaac gaacggggac ctgccctggc caccgctcag 480
gtatctgccc ggccggggcg atgggaccca aacgggcgca ggctgcccac ggtcggggta 540
cctggggcgg acgcgccagg ccgactcccg gcgagaggat ggggccagac ttgcggtctg 600
cgctggcagg aagggtgggc ccgactggat tccccctttc tgctgcgcgg gaggccagc 660
tgctgatttc tgcccggatt ctgctgcccg gtgaggtctt tgccctgcgg cgccctcgc 720
cagggcaaag tcccagccct ggagaaaaca cctcaccct acccacagcg ctccgtttgt 780
caggtgcctt agagctcgag cccaagggat aatgtttcga gtaacgctgt ttctctaact 840
tgtaggaatg aattcagata tttccagaga atgaccacaa cctcttcagt agaaggtaat 900
gtgggattaa gtaggggtct gcttgatgaa gtttaccagt gcaaagtta gttaaatgga 960
aagttttccg tgtaaatctg ggaccttttc tcttattatg gatctgtatg atctgtatgc 1020
agtcccgaag gttcatttac cattattaaa aaatttttgt cttagaaatt ttatgtatgt 1080
caacgcacga gcaaatatc aggcattggg cagaattggc aactgggtgg aggcctcgg 1140
ggaggttagc actccgaaag gaaaacagag taggcctttg gaacagctgc tgggaagagat 1200
aaggcctgaa caagggcagt ggagaagaga gggtaaaaat tttttaaggt tacatgaccc 1260
tggtatttgg agatc 1275

<210> 42
<211> 1256
<212> DNA
<213> Homo sapiens

<400> 42
ctgcagcgcc aggggtccacc tgggtcggctg cacctgtgga ggaggaggtg gatttcaggc 60
ttcccgtaga ctggaagaat cgggtcaaaa ccgcttgccct cgcaggggct gagctggagg 120
cagcgaggcc gcccgacgca ggcttccggc gagacatggc agggcaagga tggcagccc 180
gcggcagggc ccggcgagga gcgcgaaccc gcggccgcag ttcccaggcg tctgcgggcg 240
cgagcacgcc gcgaccctgc gtgcgcgggg gcggggggggc ggggcctcgc ctgcacaaat 300
agggacgagg gggcgggggc gccacaattt cgcgcctaac ttgaccgcgc gttctgctgt 360
aacgagcggg ctcgagggtc ctcccgtgc tgatcatggt ggctcgctaa actgcatcgt 420
cgctgtgtcc cagaacatgg gcatcggaac gaacggggac ctgccctggc caccgctcag 480
gtatctgccc ggccggggcg atgggaccca aacgggcgca ggctgcccac ggtcggggta 540
gccgactccc ggcgagagga tggggccaga cttgcggtct gcgctggcag gaagggtggg 600
cccgactgga tttccccctt ctgctgcgcg ggaggcccag ttgctgattt ctgcccggat 660
tctgctgccc ggtgaggtct ttgccctgcg gcgcctcgc ccagggcaa gtcccagccc 720
tgagaaaaac acctacccc taccacagc gctccgtttg tcaggtgcct tagagctcga 780
gcccaaggga taatgtttcg agtaacgctg tttctctaac ttgtaggaat gaattcagat 840
atttccagag aatgaccaca acctcttcag tagaaggtaa tgtgggatta agtaggggtc 900
tgcttgatga agtttaccag tgcaaatgtt agttaaatgg aaagttttcc gtgtaaatct 960
gggacctttt ctcttattat ggatctgtat gatctgtatg cagttcccaa ggttcattta 1020
ccattattaa aaaatttttg tcttagaaat tttatgtatg tcaacgcacg agcaaattat 1080

caggcatggg	gcagaattgg	caactgggtg	gaggcttcgg	tggaggttag	cactccgaaa	1140
ggaaaacaga	gtaggccttt	ggaacagctg	ctggaagaga	taaggcctga	acaagggcag	1200
tggagaagag	agggtaaaaa	ttttttaagg	ttacatgacc	ctggattttg	gagatc	1256

<210> 43
 <211> 55
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:PCR product

<400> 43		
gctgcccacg	gtcgggggtac	ctgggcgggga cgcgccaggc cgactcccgg cgaga 55

<210> 44
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:PCR product

<400> 44		
gctgcccacg	gtcgggggtgg	ccgactcccg gcgaga 36

<210> 45
 <211> 1273
 <212> DNA
 <213> Homo sapiens

<400> 45		
ctgcagcgca	gggtccacct	ggtcgggtgc acctgtggag gaggaggtgg atttcaggct 60
tcccgtagac	tggaagaatc	ggctcaaaac cgcttgccctc gcaggggctg agctggaggc 120
agcgaggccg	cccgcgcgag	gcttccggcg agacatggca gggcaaggat ggcagcccgg 180
cggcagggcc	cggcgaggag	cgcgaacccg cggccgcagt tcccaggcgt ctgcgggcgc 240
gagcacggcg	cgaccctgcg	tgcgcggggg cggggggggcg gggcctcgcc tgcacaaata 300
gggacgaggg	ggcgggggcg	ccacaatttc gcgccaaact tgaccgcgcg ttctgtgta 360
acgagcgggc	tcgagggtcc	tcccgtgtgt gtcattggtt gtctgctaaa ctgcatcgtc 420
gctgtgtccc	agaacatggg	catcggcaag aacggggacc tgccctggcc accgctcagg 480
tatctgccgg	gccggggcga	tgggacccaa acgggcgcag gctgcccacg gtcgggggtac 540
ctgggcgggg	cgcgcgggcc	gactcccggc gagaggatgg ggccagactt gcggtctgcg 600
ctggcaggaa	gggtggggcc	gactggattc cccttttctg ctgcgcggga ggcccagttg 660
ctgatttctg	cccggattct	gctgcccggg gaggtctttg ccctgcggcg ccctcgccca 720
gggcaaagtc	ccagccctgg	agaaaacacc tcacccttac ccacagcgct ccgtttgtca 780
ggtgccttag	agctcgagcc	caagggataa tgttttcgag aacgctgttt ctctaacttg 840
taggaatgaa	ttcagatatt	tccagagaat gaccacaacc tcttcagtag aaggtaatgt 900
gggattaagt	agggtcttgc	ttgatgaagt ttaccagtgc aaatgttagt taaatggaaa 960
gttttccgtg	ttaatctggg	accttttctc ttattatgga tctgtatgat ctgtatgcag 1020
ttcccaaggt	tcatttacca	ttattaaaaa atttttgtct tagaaatttt atgtatgtca 1080
acgcacgagc	aaattatcag	gcatggggca gaattggcaa ctgggtggag gcttcgggtg 1140
aggtttagcac	tccgaaagga	aaacagagta ggcctttgga acagctgctg gaagagataa 1200
ggcctgaaca	agggcagtgg	agaagagagg gtaaaaaatt tttaaggtta catgaccctg 1260
gattttggag	atc	1273

<210> 46
 <211> 18

CCCTGGGTTAG CACTCCGAAA

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:PCR product

<400> 46

acctgggcgg gacgcgcc

18

0957266-053300